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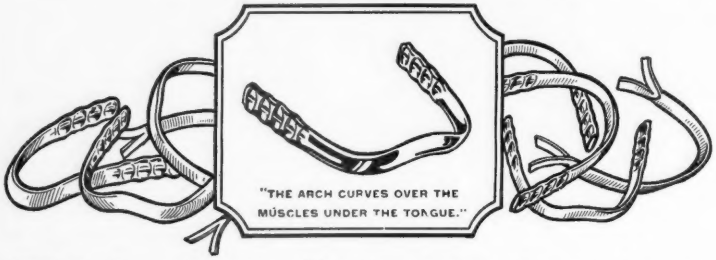

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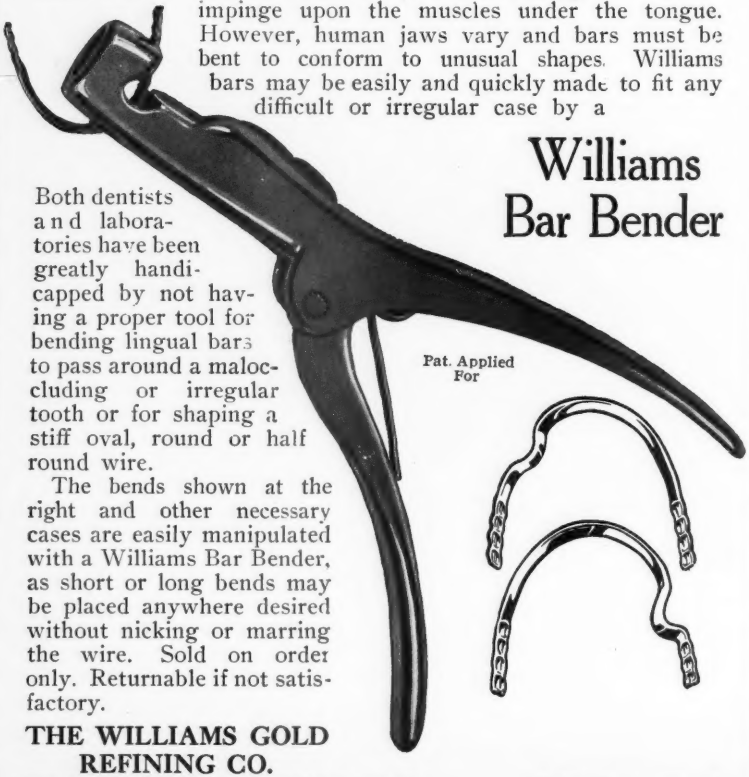

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Editor's Corner

Making a Magazine Useful

There are so many kinds of dentists and so many interests for each that several kinds of dental magazines are necessary to serve them all. For instance, there is the distinctly research magazine, valuable to all but especially interesting to the dentists engaged in research. There are thousands of dentists too busily occupied with the problems of the day's work to subscribe for or read such a magazine.

Then there are what might be called "semi-research magazines," which publish many valuable articles, some of which, however, are very difficult to read.

Both the research and the semi-research articles leave unsatisfied a want which is felt by thousands of dentists who cannot or will not read difficult things. It is a want for short, direct, helpful articles on subjects directly connected with the day's work, some "knack" of doing an ordinary thing, some suggestion like anyone of a dozen in the articles by Dr. Ulsaver now appearing in these pages. (Next article in April issue.)

Any dentist who learns of such a "knack" will tell another about it, verbally, without embarrassment, but if he sat down to write it he would think he had to "fix it up into a story," and that is as often difficult as it is useless.

Of course, this magazine wants the more serious articles, just as any other dental magazine does, but it is desirous of publishing many of the short, practical, helpful articles.

If you have been helped by such articles, contribute from your own experience to the benefit of others by sending in such. Take your favorite operation, your favorite method of educating or satisfying patients, or of performing any technique, and write it as you would discuss it with a dental friend. As you have rarely been either entertained or helped by "fine writing" do not attempt fine writing. Naturalness is one of the best of guides in writing anything.

Perhaps you have a lot of unsolved questions growing out of your personal experience and partial knowledge. Write what you know and ask the rest. Perhaps someone has the answer.

For all such articles of dental value, this magazine will pay. The payment will be proportioned to the merit and not to the length.

GEORGE WOOD CLAPP.

A Dentist's Editorial published by Colgate & Co., to Educate the Public to Better Care of the Teeth—

The article reprinted herewith was written by an eminent dentist of national repute (name on request). It will appear in an early issue of a leading woman's publication and is presented in advance for the information of the profession.

The article is published in the hope that it will inspire parents to correct any mouth deformities which may exist, and to anticipate the evil effects of tooth neglect by instilling in their children early in life the habit of daily care of the teeth.

"Safety First" in the Prevention of Dental Decay

How Oral Prophylaxis, Properly Taught and Practiced by Individuals, will Save 80% of Common Tooth Ills.

RECENT discoveries tracing the cause of so many diseases to the teeth, make mouth hygiene and the prevention of dental caries one of the most vital subjects for thought before humanity today.

If Oral Prophylaxis is efficiently taught and practiced by individuals, 80% of dental decay can be prevented.

Dentifrices, the bases of which are prepared chalk, can be used lavishly, and should be used in this way to get the best results.

The time for perfunctory cleansing is past when we know the danger of neglectful methods. Neglected teeth may mean very soon, decayed teeth. Dead teeth may result in a focus of infection leading to many diseases that are the distress of mankind.

"Safety First" should be the motto of everyone regarding teeth. So frequent examinations by dentists should be made. Many a conscientious and painstaking dentist has been surprised and painfully chagrined at finding a large new cavity in a tooth of a patient that he has seen six months previously.

Cavities start between teeth where even an expert cannot always detect them, often until the cavity has grown so large that the pulp has been exposed. To avoid this experience, have your teeth examined every three months.

Choose Colgate's for your own family and patients—it is recommended by more dentists than any other dentifrice.

THE
DENTAL DIGEST

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An Important Theory in Medicine

By George Wood Clapp, D.D.S., New York

THERE has recently been brought into prominence in medicine a theory which should be known to dentists, partly because they may have need for it as the result of personal accident or illness and partly because it may sometime come into the field of dental medicine. It is a development of the theory of autogenous vaccines, which is offered under the name "Autotherapy."

A short review of the vaccine theory may make the characteristics of autotherapy easier to understand. The vaccine theory is founded on a search as old as the history of medicine for some means to cure a disease by the use of poisons produced by the disease. When a vaccine is made by culturing germs which are not related to any particular patient, but are for general use, the vaccine is called a "stock vaccine." When it is made by culturing the germs from one patient and is intended for use only by that patient, it is known as an "autogenous vaccine." Both stock and autogenous vaccines are being used with more or less success in important branches of medicine.

Autotherapy goes much farther than even the theory of autogenous vaccines. It is based on the administration to the patient of the products of the infection, unmodified except by dilution. To cure a pus producing infection it administers pus fresh from the wound, mixed with water and drunk, or filtered and injected hypodermically. To cure gonorrhoea it administers the pus from gonorrheal infection in the same way. That isn't very pretty treatment to think about, or to take, but as Dr. Duncan rightly says, "If men and women will expose themselves to gonorrhoea they are in no position to object to any effective treatment that may be suggested."

But the pus producing infections and gonorrhoea are by no means the only infections with which autotherapy has successfully dealt. Acute bronchitis has been cured, it is said, within twenty-four hours; pneumonia, in the early stages, has been quickly checked; endometritis, mastoiditis and other similar troubles have shown improvement within a few hours, and the results tend to be permanent.

Dr. Duncan has written a book entitled "Autotherapy," in which he gives the record of many experiences, by many physicians, under widely varying conditions with autotherapy. The record is seen by a

brief review presenting cases of boils, carbuncles, multiple abscesses, infected cuts, appendicitis with ruptured appendix, abscesses of the ear, acute gonorrhoea, many infected and even desperate conditions in gynecology and childbirth, many cases of laryngitis and bronchitis, numerous cases of tonsilitis when taken early, bronchial pneumonia, and miscellaneous troubles. Rapid improvement has followed intelligent use of autotherapy, and cures are apparently made in many cases.

Dr. Duncan devotes a page to the treatment of Rigg's disease, and reports one case from Montclair, N. J., where benefit is said to have resulted from the treatment.

Dentists are no more immune to injury or infectious diseases than other people. If this method of treatment produces the results which many reputable physicians testify to over their signatures in this book, the book should be in every dentist's library as insurance on his own health and that of his family.

The method of treatment is very simple. In all extra-pulmonary and extra-digestive infections, the exudate from the infection may be given direct, diluted in water, to be drunk in doses of a size and frequency depending upon the conditions. Or the exudate may be mixed with water, filtered through a Berkefeld filter or Chamberland-Pasteur filter and the filtrate given in smaller doses, hypodermically. In infections arising in the pulmonary and digestive tracts, only the filtrate method may be employed, and it is often necessary to greatly attenuate the dose.

The only case of which the writer has personal knowledge is that of an abscess on the forehead directly over the eye. The pus from this, mixed with water, was given the patient to drink. Twenty-four hours later the suppuration had ceased and only a thin exudate came from the wound. Thirty-six hours later granulation had begun and the wound itched.

Common colds, bronchitis and pneumonia are on the increase and levy a heavy toll in deaths. If one of our loved ones is threatened and there is available a method of treatment which either aborts the disease or reduces the danger of a fatal termination, we at least want to know about it.

Dr. Duncan is endorsed by men in the medical profession whose approval could have been won only on merit. They endorse his method of treatment as scientific and successful.

The book is entitled "Autotherapy." It is published by the author, Dr. C. H. Duncan of 2612 Broadway, New York City. This article may be a "boost" for the book, but is not an advertisement in the usual sense. It is founded entirely on my reading of the book and my belief in its value to the readers of this magazine, so that I want them to know about it. I have never seen the author or any representative of his, have not been solicited or paid for this presentation, and he does not know that it is being prepared or published.

What May Be Expected of Full Artificial Dentures

By Kent Kane Cross, D.D.S., Denver, Colorado

(THIRD ARTICLE)

ESTHETICS

IN THE preceding articles, I have endeavored to give my fellow practitioners some idea of the results we should seek to obtain in the restoration of the masticatory organs from the standpoint of service. No matter how successful we may be from the standpoint of mechanical efficiency, the restoration will be a farce if the work is not artistic.

The prosthodontist must have, first of all, a thorough knowledge of mechanical construction. However, the successful laboratory man may possess the same qualification and yet be only an artisan; the prosthodontist must be the *artist* who harmonizes the dentures to the age, facial contour and physical make-up of the patient.

As a profession, we are only beginning to awaken to the importance of art in our restorative work, and I do not think that many of us are yet aware of the possibilities within our grasp, either from the viewpoint of pleasing results or remuneration. Only a few have brought back the message to a somewhat dilatory profession. The commercial dental laboratory man has been at a decided disadvantage, both from the viewpoint of producing efficient dentures and those of the presentable appearance in the mouth, because, usually he has been expected to restore the mouth to normal appearance without knowing anything about the age, sex, appearance of the normal teeth, or habits of the edentulous patient. That is asking a little too much, is it not? But what of this? A friend who has conducted a laboratory for several years, told me that his establishment had received beeswax "gob" bites to be used as impression, bite, shade guide and tooth form. Is it any wonder that we meet living, caricatured examples of "the other fellow's work?"

Dr. Wilson, in "Dental Prosthetics," says that the prosthetist must also be an esthetist or artist. He continues: "Therefore, if one would be an esthetic prosthetist, he must develop and broaden his art." It seems appropriate to say that dentists have more to do with facial appearance and expression than any other profession. Plastic surgeons may be the exception, but they operate on a comparatively small number of people.

While nature is not always at her best, it is particularly the duty of one who replaces the lost organs of mastication and articulation to restore, if possible, nature *at her best*. Recently, in my practice, two cases have been presented for full dentures. Both were elderly women and both had abnormally protruding upper incisors. To depend upon

extracting the teeth and trying to adapt gum facing rubber over the protruding ridge would have been to exaggerate the abnormality. In both cases the exodontist removed not only the labial plate of the process but also the excess of soft tissue, using sutures, and thereby permitting the restoration of "nature at her best."

It seems to me that the stock denture fails more completely (if possible) in the failure to restore the cuspid eminences, and usually

Fig. 12. Profile of Edentulous Patient.

there is too much material about the fraenum. A study should be made of natural teeth in the mouth, and the normal gum effect should be reproduced so far as available material and artistic carving make it possible to do so.

It was recently my privilege to see Dr. Rupert E. Hall do some exceptional work in this line. The wax was carved so as to reproduce not only the cuspid eminences, but the free margins of the gum—

labially, buccally and lingually. The rugae were also reproduced, as well as the interdental spaces, making possible the use of floss between the anterior teeth. It has been suggested that these carvings only serve as food catchers. I would say that this would be true in cases where patient has from habit a filthy mouth, but with the class of patients who could be taught to care for the mouth after pyorrhetic treatment, it would be a desirable, if not a necessary, procedure.

Fig. 13. Profile with Dentures in position.

Some time ago I discarded plain gum-pink rubber, except in special cases. Granular gum-pink rubber has proven fairly satisfactory, but not entirely so, due to lack of strength and too much uniformity in color. Sheets of plain pink, or base-plate pink—or both of these—may be placed against the granular, and the mass is then cut in strips. These are packed so as to break the continuity and camouflage the natural effect.

TOOTH SELECTION

There is probably no step in the construction of artificial dentures where we have failed so dismally as in tooth selection. Failures have been due to three causes: (1) The shade selected is too light and too uniform; (2) the moulds selected are too small, and (3) the arrangement is too regular.

It was my privilege, as a young practitioner, to see Dr. J. Leon Williams exhibit his slides, comparing the forms of the artificial teeth then on the market with corresponding normal, natural teeth. The natural looking and artistic forms of teeth which Dr. Williams has designed, are the result of years of research and investigation.

The authors of Professional Denture Service have given us some excellent instructions in selecting teeth.

Quoting from Page 105: "Starting with the neck of the inverted upper central at the margin of the chin, the cervical third of the tooth outline will follow the outline of the lower jaw; the outline of the middle third of the tooth will follow the outline of the cheeks, and the incisal edge will be at the brow line, about two-thirds of the distance from the root of the nose to the normal hair line." Again on Page 122, Professional Denture Service, we have an explanation of the shade guide which should interest every dentist who desires to be an "esthetist" in his work.

In the Dental Digest, January, 1919, Dr. Clapp has explained in a thorough manner, the meaning of the variation in the shades of teeth from the artist's standpoint. It is not possible to make an exhaustive study of color effects here. However, we recommend the use of a mould guide, and believe that not only anatomical moulds are necessary for the substitutes to look like teeth, but there must also be a reproduction of the shading from the lighter central incisors to the darker laterals and cuspids.

The effect of wavy enamel is also reproduced. A smooth surface reflects light while a wavy surface diffuses it. Proper grinding of the labial surface of the teeth has a further effect of diffusion of light. This is particularly good practice in the case of old men. The surface of the upper incisors should be roughened with a stone, and the cuspids ground to represent abrasion. A case so ground may look repulsive out of the mouth, but surprisingly harmonious in the mouth. Some alleged restorations remind us of John Kendrick Bangs' story, "Ghosts I Have Met and Some Others." Others suggest the funny page of the Sunday paper.

We do not advocate the use of gold crowns placed in artificial dentures, and rarely gold fillings. It does not look particularly natural to have a collection of conspicuous jewelry in the mouth.

Having selected a right upper central that harmonizes with the features, the right upper lateral and cuspid are aligned to the satisfaction of the patient and operator. Then the three upper left anteriors are aligned. It is well to assemble the six lower anteriors at this sitting. It is possible to finish the case without a further try-in if the bite is right and each step is taken carefully. In place of the show of gold work, care should be taken to arrange the case slightly out of perfect

Fig. 14. Showing natural appearance without too much uniformity of arrangement of teeth.

occlusion, as for instance, an over-lapped lateral, or the centrals in not quite perfect alignment.

Dr. Campbell once showed me a method of determining whether a shade of tooth harmonizes with the features. Look past the tooth and if not especially attracted to it, the shade harmonizes. The hand mirror in the patient's hand is objectionable, as she sees only the tooth

or teeth. Harmony in alignment may also be tested in this way. Conversational distance, two feet or more, is a safe distance in this case.

The chair should be situated so that the prosthetist can walk around it and view the assembled teeth from each side and directly in front. It is well to have the patient get up and walk around the room. This affords views from different angles and degrees of light, and rids the patient of self-consciousness, and at the same time affords the operator a chance to view the whole restorative effect from a greater distance.

I cannot leave this subject without mention of the splendid series of articles in the Digest during the past year by Dr. G. W. Clapp, and an article entitled, "Color of the Teeth," by Dr. F. H. Orton, published in the "Summary," and reprinted and discussed by Dr. J. Leon Williams in the Digest. It is the work of such men that should, and will, stimulate the profession to needed activity in the art of prosthetic dentistry.

The *art* of reproducing the lost organs of mastication is a comparatively new subject, and it behooves us to go deeply into the study of this subject, as well as into the field of scientific construction of *serviceable,* artificial dentures. There is no doubt that the reward for our diligent study and painstaking application of such study will be great, and not the least part of it will be the gratitude of a following of men and women who, from age or misfortune, are not merely caricatures of their former selves, but citizens in appearance and self-confidence.

Retraction of an Error in a Statement Concerning Dr. Rupert E. Hall

By George Wood Clapp, D.D.S.

IN THE course of an article in the December issue of this magazine, reporting impressions concerning the meeting of The National Society of Denture Prosthetists, I quoted my understanding of the close of a paper by Dr. Rupert E. Hall, saying that "so far as practical requirements are concerned the movements of the Hall articulator and the Gysi articulator will be found practically identical."

A letter from Dr. Hall calls attention to the fact that this report is a misunderstanding of what he really said. He then reproduces the last three paragraphs of his article. As any misrepresentation of Dr. Hall in the report was entirely unintentional, and as it is the policy of this magazine to give every man a square deal, I hereby express my regret for the unintended error and reproduce the paragraphs, which are as follows:

"My next purpose will be to show that the lateral movement of the Gysi articulator has been misinterpreted.

"When Gysi first introduced his theories and articulator, the metallic pins, termed points of rotation, were true to name. But upon embodiment of the mandibular lateral movement into his articulator he upset his rotation point theory and created in his appliance an entirely new and different character of movement. The movements of the Gysi articulator do not show the lateral movement to occur about a right and left axis as it is claimed and represented by the so-called rotation pins, but registers a movement that is in accord with the new idea of a central rotation axis introduced in the Hall articulator. In principle, the Gysi and Hall articulators are in practical accord with each other.

"It is to be understood that I am not differing from Gysi's findings from tests and graphic projections, nor claiming that his instrument is not fairly correct in movements. On the contrary, I believe his findings and the movements of his articulator approximately correct, so far as they go, but I differ very materially from him in his interpretation of these movements."

It is seen that in the first paragraph I stated that *"In principle,* the Gysi and Hall articulators are in practical accord with each other," and that in the third paragraph I stated that, "I believe his findings and the movements of his articulator *approximately correct, as far as they go."* (The phrase "as far as they go," will read in the National Dental Journal "incomplete.")

Dentistry for the Rich and the Poor

By Dr. Charles Wolff, New York, N. Y.

THE privilege to enjoy perfect health is as much the inalienable right of the poor as of the rich. Yet while no one begrudges it to the rich, there are some who would like to see a way to enable the poor to more easily obtain their share of this precious privilege.

Science has progressed rapidly in the last century, but nowhere more marked than in dentistry. The dentist is no longer an artisan with his tools, a highly-skilled mechanic; he has become a thorough scientist, a diagnostician, a very important specialist of Stomatology.

His field is broadening out to include bacteriology, roentgenology, urinalyses and blood tests. He is frequently consulted now by his medical confreres, as he consults with them. As his work becomes more and more skilled, of greater and greater importance, his fees are necessarily mounting higher and higher.

The unsanitary gold crown, which appealed to the masses because of its reasonable price, has been displaced by the cast crown which is more expensive.

The patient who desires a lost tooth restored can no longer multiply the number of teeth missing by five or ten to arrive at the cost. The old-fashioned bridge, fixed at both ends to gold crowns, is now obsolete; its place has been taken by the inlay bridge, and still more recently by the removable bridge. How soon will it be before that, too, will have to yield to the movable bridge?

With each change, the cost of the work has increased, and the poor patient has watched the change silently with aching heart and aching tooth.

It is as though we were to remove the crowded subway cars from our metropolis because physicians decided they were unhealthy, and replaced them with parlor cars, nicely upholstered, but costing twenty cents instead of five. The great mass of the public would protest at an additional expense they could ill afford.

In dentistry they have no voice. We cannot lower the standard of our work to suit the requirements of the patient's purse, but since we are professional men, and not business men, surely some cognizance ought to be taken of the great body of people who are unable to pay for modern scientific dentistry. True, there are the hospitals and the dispensaries, but do you suppose these people would accept such service?

And if by chance, even 10 per cent of them suddenly applied for dental care, the system would be swamped and demoralized. Why, now when but the needy seek their service, the system can scarcely meet the demand.

I wonder when a very learned professor advocates a root canal technique which requires hours of careful, painstaking, skillful work, I wonder whether he realizes he is suggesting a method inapplicable to the practice of the dentist who caters to the man of moderate means.

And so, if the dentist is conscientious, he has either the choice of applying the lengthy technique at a ridiculous fee, or resorting to the forceps. No wonder a cry has arisen against the indiscriminate extraction of teeth, yet which is the greater evil, indiscriminate extraction, or improper root filling?

Since the disadvantages of fixed bridgework have been known to the public, disseminated through press publicity and dental advice, I notice a tendency to avoid this type of work. Yes, they won't have fixed bridgework, and when they hear the cost of removable work, they go without either, and unconsciously suffer by lost power of mastication because of this increased knowledge.

It is unfair to give one patient a beautiful, clean, sanitary, removable bridge because he can pay for it, and insert in the mouth of the next patient a fixed bridge made along lines which modern teachings prove incorrect, merely because he is not so wealthy.

With our system of dentistry as it is today, I realize that no other procedure is possible. Then let us all, by concerted action, do our best to change those conditions which make such an iniquitous situation necessary.

If oral hygiene is important, if the care of the mouth is as necessary to bodily health as we think it is, then every human being has an equal right to the same care and attention, regardless of his circumstances.

If that is socialism, let us be quick to incorporate it in every political creed. I am more willing to believe it is Americanism, and that it was in the minds of the writers of our constitution when they prepared its preamble.

Men like Dr. Jos. H. Kauffmann and others who have advocated a form of government dentistry, are, I believe, talking along the right line.

During the mobilization of our forces for the world war, the government recognized the value of a healthy mouth, and millions of operations were performed on the teeth of our soldiers and sailors at the expense of the government.

If the plan can be successfully operated in war time, why can't it be just as successful now? Surely health is just as essential for industrial upbuilding as it was for martial destruction.

Scaler and Polish

By Marie A. Sawyer, D.H., Rochester, N. Y.

ONE abnormality with which the hygienist has to deal, and upon which little has been said, is stain. In training, we heard of the dark stain which seemed to follow the gum margin, and was supposed to be the residual remnant of Nasmyth's membrane. But when this has been removed and the same patient returns with the same kind of stain it must be more satisfactorily accounted for.

A deduction, which to me seems more feasible and explanatory, is that dark brown stain is caused largely by tea and coffee drinking—mostly tea drinking. It will be found that the tea-drinker will show one of two kinds of stain—either the kind that follows the gum margin and fills pits and uneven surfaces with stain, or gives a uniform gray shade to the enamel over which it is evenly distributed. Its tenacity may be attributed to the tannic acid which tea contains, and, as you know, tannic acid is the agent which dyers use in setting the color in fabrics.

One of the most persistent cases of stain with which I have come in contact was observed on the teeth of a young man who was both a smoker and inveterate tea-drinker. In his case the stain was evenly distributed over the labial and buccal surfaces in a dingy gray shade. The lingual surfaces showed a combination of nicotine and tea-stain. The grayness on the labial and buccal surfaces was so uniformly distributed that it gave the impression of being the natural color of the enamel. The young man was given three appointments and it required the utmost persistency and polishing to accomplish that which seemed almost impossible.

Now that I have given the suggestion that tea, coffee and nicotine stains adhere to the tooth surfaces by the action of tannic acid which is responsible for the difficulty, the best method for its removal should be determined by an expert chemist. Of course, sulphuric and acetic acids could be resorted to but for the danger connected with their use.

Another difficult problem is that of sensitive and bleeding gums. In such patients I remove all the tartar and deposits at the first appointment which can be done without injury and discomfort, followed by a treatment in the chair with pyorrhea liquid. After this I recommend a home treatment of an astringent solution to which sodium chloride is to be added and pyorrhea paste used in cleaning.

There is much to be said in favor of sodium chloride solution as a mouth wash. I find that patients who have persisted in its use have healthy tooth and gum conditions. One lady patient of sixty who has used salt and water as a mouth wash all of her life has thirty-one perfect teeth to show for it.

A New Research Society

ANNOUNCEMENT is made of the launching of the National Anesthesia Research Society, with the avowed purpose of collecting data and prosecuting original research in this field of medicine. The objects of the Society as set forth in the constitution are:

> To promote the science of anesthesia and to enable its members, after first having obtained the approval of the Society, to submit without prejudice to the dental and medical professions, any views, findings, or accomplishments they have attained; to obtain from all available sources such information as is now extant concerning any material, liquid or gas, known to have anesthetic properties; to arrange, in cooperation with dental, medical, and anesthesia associations for the preparation and delivery of suitable interesting and educational papers on the general subject, or relative to some particular anesthetic; to use influence to prevent the publication or circulation of any false or unauthentic statements concerning any and all conditions, symptoms, or phenomena prevailing during or after anesthesia by any anesthetic, and to prepare and distribute on request, forms on which such information can be tabulated with uniformity; to distribute by pamphlet or publication, as its funds may permit, and its governing powers authorize, such reliable data as it may collect or obtain through its members or others interested in the subject of anesthesia, for use by the medical and dental professions; to cooperate with state authorities and other bodies in the preparation of suitable legislation to safeguard those to whom anesthetics are administered as well as those called upon to administer them; to use its influence in every way and to give its aid toward the advancement of the Science of Anesthesia.

The Research Committee which will have supervision of original work and the editing of material designed for the profession and professional press, is headed by F. H. McMechan, A.M., M.D., of Avon Lake, Ohio, editor of the Quarterly Supplement of the American Year Book of Anesthesia and Analgesia. W. I. Jones, D.D.S., president of the Inter-State Anesthetists' Association, will have an active part in the committee's work. Representative anesthetists of the country, who have distinguished themselves by research and progress in their field, are being invited to join the committee.

The Society has been endowed with limited funds, which will permit it to demonstrate that there is a field of usefulness for it.

Solving a Difficult Problem

By Paul S. Coleman, D.D.S., Wilburton, Oklahoma

IN THE United States of North America there is plenty of room for another fifty thousand dentists. There are in the United States at least thirty thousand physicians who are not earning a decent living, and the dental profession is open for ten or twenty thousand of these, who could advantageously study dentistry. With all the new departures which are coming into use, and the findings of various research institutions, the profession is about to get away from the average dentist; that is to say, there is more and more a constant need for the physician in the way of helping the dentist, and also the physician is rapidly forming the habit of ordering a patient's teeth extracted upon every occasion when he is unable to locate the cause of constitutional trouble. When he gets lost in the case he orders the teeth extracted, and as a rule his word is law; just what the dentists have to say in the matter is really of little consequence, for in the physician's mind there lurks the belief that the dentist really knows very little if anything about constitutional troubles, and possibly he is right.

Another thing, the dentist will rarely undertake any kind of an operation other than the extraction of teeth and minor mouth operations without the assistance of a physician, and the principal reason is that he wants someone to sponsor for him, which means that if a physician is present he feels perfectly safe, for if anything happens no undue comment is made because of the presence of the physician. In my own practice, and in the practices of many men I know of, we have formed the habit of shipping the patient off to the nearest hospital or recommend him to some physician for the operation, mainly because we do not like to be responsible in case something serious might happen.

For instance, living as I do in a small town, every now and then an acute abscess shows up, usually a lower molar, with patient unable to open the mouth and sometimes requiring a drainage from the outside and directly under the tongue or lower maxillary. These, while not always serious, are often very frightful and ugly looking, and the patient usually wants sympathy more than anything else; so in handling this class of patient, I first prescribe a mouth wash, with one of the mud preparations as an outside dressing and an opiate for relief; as soon as ready I send him over to another dentist, who is also a physician in a neighboring city, who uses general anesthetics, such as nitrous oxide, inserts the lance, cleans up the case and sends the patient back.

The patient usually will cheerfully dig up a twenty-five dollar fee for the other fellow, while if I should charge him five dollars for such services he would simply have a fit; the reason for this is that the dentist has for years known the patient well, and somehow we never appreciate

home talent and the good grazing is always on the other side of the fence. In this connection, I might add that two out-of-town dentists always send certain cases to me, and I do just as the dentist does to whom I refer this class of patients.

To the physician who will specialize in dentistry there is a great field awaiting, because the dentists who are now practising are barely scratching the surface, and in my own particular little nook, while I and my co-workers are doing our best, there is yet a great deal that can be done for the human race along dental lines.

We see articles from many men of advanced ideas professionally, who are trying to solve the dental problem by asking what the matter is, and we see millions of dollars appropriated by men of vast wealth for medical research but never a dollar for dental research, because dentistry occupies such an infinitesimal space in the general public's consideration, whereas if one-third, one-half, or in fact all of our new members were graduates of medicine and specialized in dentistry, we would be in the running; and when a case came up which necessitated an operation, instead of hunting for some surgeon to do the work we could in our offices care for all of those who do not require hospital treatment; in fact, in a short while it would be nothing out of the ordinary to see a dental specialist upon the staff of all such institutions.

A Short Cut in Plate-Polishing

By Stewart J. Spence, Chattanooga, Tenn.

OUR method consists in using the bristle polishing brush on the wax trial-plate in much the same way that it is used upon the vulcanite plate. We all know how uneven the surface of a vulcanite plate comes out of the vulcanizer, even when we have carefully smoothed the wax with scraper and blow-pipe. Unevenness, which we could not detect on the wax, shows on the rubber as soon as we begin to cut it down.

Uneven surfaces refuse to yield to a reasonable amount of pumice attrition, and have to be gone over with scraper and sandpaper. The sandpaper reduces these bumps, but leaves behind it scratches which only with difficulty can be erased with pumice. The interdental spaces are especially difficult to reduce; for the wax has a way of over-filling them, or else not filling them enough, and besides it is apt to climb up over the crowns of the teeth in a way which, when reproduced in vulcanite, requires a chisel to reduce to proper bounds.

The remedy for all this is, as aforesaid, to use the revolving bristle brush on the wax trial-plate, using it both on labial and lingual surfaces. This process smooths down the bumpy places; cuts down the climbing wax from around the crowns; rounds the interdental wax, and reduces to desired fullness. The next thing is to remove the scratches left on the wax by the bristles. This is easily done by going over the wax with a rag or pledget of cotton, wet with coal-oil. This leaves a very smooth surface, to which it is almost superfluous to add by rubbing soapstone over the wax, but as this can very readily be done when soapstone is used for separation of flask, it is well to employ it. By this easy method we get a vulcanite plate which, after it comes from the vulcanizer, is readily finished with pumice and chalk—no scrapers, no sandpaper.

Though Critics Jeer

If you've got a song in you—sing it!
  Though all the critics jeer,
Out from the soul of you bring it
  And those who care will hear.
Though some may say it's a "trite one,"
  And loudly their laughter fling,
Your song will reach to the right one
  So sing!

Duties of an Assistant

By L. M. Kelly

DURING the past few months I have been fortunate enough to receive a few letters from dentists' assistants, enquiring as to the general duties of an "assistant." It is to be hoped that the few points I can offer concerning my own experience will be of some interest to many readers in similar positions. Of course, the duties of assistants could fill pages, but I have tried to condense as much as possible and still give the necessary information.

I have been in my present place for two years, and after much planning, I have tried to systematize my work as much as possible. I begin work at eight o'clock in the morning, and usually spend from eight to nine in straightening the office. We take great pride in our reception room, and although it is not elaborately furnished, it is well furnished. We have tried keeping a color scheme in rugs, draperies, etc. We also have all the up-to-date magazines, including a Style Book. Few women have time to begin a story, but never could resist a Style Book. This may seem trivial to you, but the little things are what really count in public work. Rearranging the furniture occasionally is also a good plan.

If the doctor has an appointment before nine o'clock, which happens quite often, he never insists upon my staying in the operating room, but by nine I am usually ready for work.

While assisting at the chair, I try to work one step ahead of the doctor; while he is preparing a cavity for an inlay impression I have all the instruments and wax ready before the preparation is completed. Then while the wax impression is being finished, I find time to slip into the laboratory, measure the investment, wet the rings, etc. While the doctor is mounting the impression on a sprue I mix the investment, and in that way we save several minutes. Now after several months of practice, I am able to do all the casting. The same plan is carried out in crown, bridge, or plate work, canal fillings, or whatever the operation may be.

Much time is lost by the average dentist in answering the telephone, making appointments, and the settling of accounts. It takes time to get the patients' confidence in these matters, but by persistence and accuracy they will soon learn that an assistant is just as efficient as the doctor in such matters.

We aim to close at five, and from five to six we go over the books, answer the mail, order supplies, and do as much of the general office cleaning as possible.

Occasionally it is necessary to work nights for a short time; if this occurs the doctor shows consideration for using my time and always repays me well.

While the above only gives a brief account of the duties performed in my present position, the thought often occurs to me that taking the dental profession by and large an assistant's work could easily be standardized, so that in taking up a new position with any dentist anywhere it would not be necessary to begin to learn one's business all over again.

How War Destroys Civilized Methods

The great Haviland China Factory at Limoges was turned over to the Americans for hospital purposes and the library of Orleans was stripped of 100,000 books to make room for narrow cots and operating tables. In Vichy, hospitals were established in eighty-seven hotels, while seventy other hostelries were similarly converted in and around Vittel and Contrexeville. Two of the outstanding features of American hospital work in France were the great hospital centers such as Mesves with 25,000 beds and the mushroom 1,000-bed "Type-A" hospitals, that standardized all American-built hospitals in France.

Summing it up, the Army Medical Corps and the Red Cross were able to keep 93¾ per cent of the fighting forces effective for duty at all times, and of the remaining 5.7 per cent, only 3.4 per cent were incapacitated through disease. This is a record on which the Army and the Red Cross can look back with satisfaction.

L'Envoi

(With apologies to Kipling)

When Howe's latest method's been followed, and the roots are all sterile and dried,
And the oldest X-rays have faded, and the newest ideas have died,
We shall rest, and, faith, we shall need it—let's offer a prayer or two,
'Till the Master of All Good Dentists sifts root canal work through and through.
And those that are filled with nitrate—they shall sit in a blackened chair;
They shall lash at the worn-out system with traces of germs that are there;
They shall find subjects to poison—central, lateral, and all;
They shall work for a germ called a microbe and never be tired at all!
And only the Patient shall praise us, and only the Patient shall blame;
And no one shall work for money, and no one shall work for fame;
But each for the joy of a treatment, and each, by his guiding star,
Shall fill the roots as he sees fit, for the sake of the teeth as they are!

DENTAL LAWS

Insular Commonwealths

By Alphonso Irwin, D.D.S., Camden, N. J.

GREAT Insular Commonwealths, such as the British Isles and Ireland, Australia, New Zealand, Tasmania, New Guinea, Ceylon, Formosa, Greenland, Iceland, Cuba, Madagascar, all the islands belonging to the Japanese Empire, Java and all the Dutch Colonial Possessions, the Danish Islands, the Philippine Islands, as well as the Islands scattered throughout the world, are under the dental regulations enforced by the respective nationalities who govern them. In some of the larger islands, such as Cuba, where the influence of the Spanish race is still felt, the civil ordinances partake of the Castilian type, but as the remaining islands are divided up between American, British, French, Dutch, and Danish Protectorates, such regulations as exist follow out the racial characteristics. They correspond to the laws of the national governments in control of them.

The same thing is true of British Guiana, Formosa, Newfoundland, Nova Scotia, Prince Edward Island, Haiti, Hawaii, Porto Rico, and Jamaica.

Passing on to the group of smaller islands, such as the Azores, Bahamas, Barbadoes, Bermuda, Canary, Cyprus, Falkland, Fiji, Gibraltar, the Leeward Islands, Mauritius, and St. Helena, Madeira, Malta, the Solomon Group, Trinidad, the Windward and Cape Verde Islands, we find that they also maintain license regulations for the dentist, corresponding to the ordinances of their Protectorate, as in the larger islands, although they are not so strict in enforcing them, or so exacting about examinations, if they are required at all; such concessions are dependent entirely upon the nature, nationality, and value of the candidates' credentials.

These regulations are quite uniform in two respects, at least: First, they favor native dentists and naturalized citizens who are graduates of institutions located within the boundaries of their respective nationalities. They pursue a policy of reserve amounting almost to exclusion in regard to foreign-born dentists, especially if they are graduates of foreign schools *only*. The difficulties presented in the way of alien dentists applying for a license to practise dentistry make the attempt almost prohibitive. The only exception that may be noted is between those countries possessing reciprocity treaties with each other, and they are few in number, namely Great Britain, France, Italy and Japan.

In South America diplomas from South American colleges are accepted in those countries between whom reciprocity treaties exist, namely, Argentine, Bolivia, Chile, Colombia, Ecuador, Paraguay and Peru. The license granted in one of these countries permits registration without further examination in another of the above-named countries. Consequently any Insular Commonwealth governed by any one of these countries would be granted the same privilege of reciprocal interchange of licenses to practise dentistry upon request by a native or naturalized South American graduate of a local college.

Second: The granting of dental licenses is modified, if not absolutely controlled, by the medical profession. Hence a medical degree enhances the value of the credentials of an alien dentist applying for a license. The only modification noticeable in this respect is, of course, in the islands of little importance and mixed population, which consequently hold out slight inducement to the alien dentist for a location to practise. The medical influence even extends to Greenland and Iceland, under Danish rule, where the "Loeknaskoli" (School of Physicians), located in Reyhjavik, Iceland, controls the practice of dentistry as well as medicine.

In many of the groups of smaller islands, little difficulty would be experienced by the alien dentist in gaining a foothold, especially if he was a competent practical operator or possessed suitable credentials from a reputable dental school and licensing body, endorsed by the legal national officials of the countries concerned.

It should be borne in mind that in speaking of alien dentists and foreign-born practitioners, we refer to the natives of the United States of North America, who may apply for a license to practise dentistry in some country other than their own, as well as to natives of other countries emigrating to foreign lands.

AUSTRALASIA

Lest time and distance have obscured our ideas of the Antipodes, let us refresh our memories with a few general observations. The Island of Australia is really an Island Continent, approximating somewhat in shape and size the United States of America. Its area is 2,946,647 square miles. It is divided into five principal states, two of which are of enormous size, and each having its own dental laws. The States of Queensland and South Australia have recently adopted dental regulations, and possess dental schools and universities, where examinations are conducted. Thus applicants may address the Board at Adelaide, South Australia; or Public Health Department, Perth, West Australia; or Home Secretary Department, Brisbane, Queensland; or Registrar-General, Wellington, New Zealand; or the Department of Public Health, Hobart, Tasmania, according to the commonwealth in

which he desires a license to practise dentistry. It should be remembered that the Medical Council or Medical Board grants licenses in these states, and it is safe to address the Secretary of one of these Boards for information, and they will transfer the communications, if necessary, to the Dental Registrar; for the Examining Boards of these Colonies are composed of a conjoint Board of Medical and Dental Surgeons, and examinations are conducted under medical supervision by University men and representatives elected by the dental profession, with the Faculty and Medical influence dominant in the conduct of the examinations.

Victoria and New South Wales are the oldest settlements and most populous states, as well as the ones most advanced in learning, developed and acquired resources. Cities, such as Sydney and Melbourne, are competing with the largest cities in the world. When it is remembered that within fifty years the press used to refer to the penal settlements of Australia, Tasmania, and New Zealand, as they are now called, and then consider the marvelous growth, the enterprising people of superior ability and intelligence who now occupy those Islands, we must conclude that among the possibilities of the future is the development of a *powerful Republic,* a world-power that is ordained to shape the destiny of the Orient and rescue it from vice, ignorance, want, disease, barbarism, and misgovernment. All hail the United States of Australia!

The diplomas from dental schools in the United States of America are not registered. British subjects possessing British degrees of recognized schools which are properly certified to and accredited, are registered, providing the Dental Examiners approve the credentials. Otherwise the candidate must take the courses and examinations of one of the Australasian Dental Colleges and obtain an Australian degree. The Secretary of the Australian Dental College is Mr. Ernst Joske, L.L.B., Spring Street, Melbourne, Victoria, Australia.

The curricula for the degree of Bachelor of Dental Science and Doctor of Dental Science are graded and described in detail in the Calendar of the University of Melbourne. Courses leading to the Degrees of Bachelor of Medicine and Bachelor of Surgery are also provided. This Calendar may be obtained by addressing the Registrar of the University of Melbourne, Spring Street, Melbourne, Victoria, Australia.

No provision appears to be made for granting the certificate L.D.S. (Licentiate of Dental Surgery) in Australia. The inference naturally follows that this certificate is granted upon the recommendation of the Examiners of Great Britain and Ireland.

Among the Colonial Possessions of the British Empire, the only exception noted is in the Province of Ontario in the Dominion of Canada, where the Board of Directors of the Royal College of Dental Surgeons

are authorized to grant the L.D.S. certificate, also the "Dental Association of the Province of Manitoba." Reference will be made to the Canadian certificates again.

The situation in Australia resolves itself thus:

The Australian dental laws make specific mention of and recognize the credentials from the Universities of Tasmania and New Zealand and the other states of Australia and the United Kingdom of Great Britain and Ireland; but they do not recognize the credentials from the United States or Canadian Universities. How they reconcile and adjudicate this complex legal "mix-up," when they come to exchange dental diplomas with England, France, Italy and Japan, between which countries reciprocity treaties have been consummated, is a problem that can only be solved by British wit, Continental ingenuity and Oriental subtlety. The dentist possessing United States degrees naturally wants to know where HE comes in for recognition in those countries. One way that seems practicable is as follows: The 1919 announcement of the University of Edinburgh states that the "Holders of Certain Degrees or Licenses in Dental Surgery recognized by the College will be admitted to the First and Second Professional Examinations with exemption in the subjects of Chemistry and Physics, provided they produce evidence (a) of having passed a satisfactory preliminary examination in General Education, (b) of having completed the curriculum of professional study required by these regulations, and (c) of having passed the required professional examinations for their degree or license in Dental Surgery." The following are the Degrees and Licenses at present recognized: D.M.D., University of Harvard; D.D.S., of the University of Pennsylvania; D.D.S., of the University of Michigan; License of Dental Board of Victoria, Australia; Bac. Den. Surg., University of Sydney.

Therefore, the graduate of the Dental Department of Harvard and the Universities of Pennsylvania and Michigan, may take the course in Edinburgh University Dental School to obtain the certificate of Licentiate of Dental Surgery, and if he is successful in passing the final examination, this certificate, upon his becoming a British subject, is registrable in the British Empire and its colonial possessions, including Australia and the Dominion of Canada. Another illustration of Dickens' "circumlocution route" to reach the goal of one's ambition.

The alternative left is to obtain a position as assistant dentist to a native resident dentist, and then follow the local regulations enforced in that country.

This delightful state of affairs is made more interesting by the omission of the Dental Schools of other Universities in Great Britain and Ireland to announce that they accept the degrees, literary or professional, even of Harvard, Pennsylvania, or Michigan Universities.

While the possessor of American credentials is "sitting on the anxious bench" awaiting the verdict of the Judges, the British subject possessing British degrees walks right in and receives the highest prize.

The anachronistic state of dental licensure in the vast British Empire, covering an area of 13,153,712 square miles, and including a population of one-fourth of the human race, is also illustrated by the following disclosures: You ask why, if the Canadian Universities can grant the certificate of the L.D.S. (Licentiate of Dental Surgery) and the L.D.S. is registrable in any part of the British Empire when accompanied by specified vouchers of identity and authenticity, why might not the American dentist take the course in a Canadian Dental School, receive the L.D.S. certificate and thus save himself the trouble and expense of going abroad to the Edinburgh University? The answer is simple. It appears that the graduates of the Universities of Australia and New Zealand are recognized without examination in Great Britain, although neither of the Universities of these colonies announce that they grant the L.D.S. certificate, and Canada does grant that certificate (after being authorized to do so, by both the Civil and Pedagogic Laws), yet "no recognition or exemptions are granted graduates of Canadian Universities or the Dominion Dental Council." But a large number of Canadians have been granted a license to practise their profession in Great Britain. Why should not the Canadian Dental Graduates be allowed to practise in Great Britain, Australia and New Zealand, upon the same terms as those extended to other dental Colonial schools? The American graduate and Canadian graduate are put upon different bases, according to these regulations, with the advantages, of course, all in favor of the British subject and graduate, including also the Canadian graduate, but the graduate of the Australian Universities would appear to possess advantages over the graduates of all other Colonial as well as foreign Universities.

Although the Dental Laws of Australia, New Zealand and Tasmania do not recognize Canadian credentials, yet the Canadian Dental Laws are so worded as to recognize the credentials of the Australian Universities.

Much more might be said in regard to the dental laws of Australasia, and their relation to the graduates of schools in other countries, but enough has been pointed out to indicate that the present regulations existing there are not at all favorable for the admission of *foreign-born* dentists with credentials from colleges in foreign countries *only*.

The situation in Australasia created by the decimation of its population through the war, is problematical as yet, when taking into consideration the prospects for obtaining licenses by foreign-born and foreign-educated dentists. The only modifications in the recent amendments to the Australian dental laws relate to concessions allowed for

those who have served in war, which concessions have time limits attached to them, neither applying to the alien dentist serving in the World War, who might want to practise in Australia.

We herewith submit official data in regard to the dental regulations enforced in the two oldest and most populous states of Australia.

Sydney, New South Wales

I have pleasure in forwarding a copy of the Act and regulations now in force in the State of New South Wales. The laws of the other states of the Commonwealth differ somewhat; for instance, Victoria holds an examination after a four years' course leading to the degree M.A.C.D. (Member of the Ancient College of Dentistry) and then a further examination under certain conditions for the degree D.D.Sc. Queensland and South Australia have lately started colleges in their respective states, whereas New South Wales and Victoria have had schools established over twenty years.

Victoria, Australia

Each of the several States of Australia has its own Dental Law. The question of the recognition of American Diplomas is governed by Section 53 of the Medical Act, as follows:

Section 53. The certificate granted in a British possession other than the United Kingdom, or in a foreign country which is to be deemed such, a recognized certificate as is required for the purpose of this Part shall be such certificate, diploma, membership degree, license, letters testimonial, or other title, status or document as may be recognized by the Board as entitling the holder thereof to practise dental surgery or dentistry in such possession or country, and as furnishing sufficient guarantee of the possession of the requisite knowledge and skill for the efficient practise of dental surgery or dentistry.

The Dental Board in arriving at its decision under the said section requires that the applicant shall satisfy it that he has complied with the following conditions:

(1) That he has passed a preliminary examination equivalent to the examinations required for Matriculation in the University of Melbourne, including passing in physics as a compulsory subject.

(2) That he has served under articles of apprenticeship with a dentist for three years.

(3) That he has gone through a University Course, extending over a period of four years, for the acquirement of the professional knowledge of dentistry, and has passed four annual examinations.

Dental Law and License Requirements of CUBA

I. Examination of foreign-born dentists possessing diplomas from dental institutions in foreign countries (U. S. A. included) is required: (a) Examinations are theoretical and clinical. (b) Examinations both written and oral are conducted in the Spanish language. (c) If an interpreter is allowed, he must be selected by the Examiners, and paid $15.00 for his services by the applicant for a license to practise dentistry. (d) Examinations are conducted under the direction of the Department of Public Instruction in Havana. (e) Members of the Faculty in the University of Havana compose the examining Board.

II. *Credentials*: The credentials of an alien dentist should consist of (a) dental diploma, (b) a State Board dental license, (c) Visé, (d) Certificate, (e) identification, (f) translations, (g) photographs.

Graduates of foreign schools must present their degree from an institution registered by the University of Havana, (providing it has been issued by an authorized institution, one which fully authorizes professional practice in the country, state, or territory wherein the degree was issued), with the signatures thereto duly legalized. Each of these requirements must be proved by a certificate properly attested. Besides furnishing such proofs, the petitioner must be rightfully identified before the Department of Public Instruction. (It is the rule in foreign countries to require two residents—free-holders usually—who are *not* related to the applicant, to vouch for the identity of the applicant and the authenticity of the credentials.) In this connection a recent unmounted cabinet-sized photograph of the applicant, properly attested, is necessary.

A diploma in order to be valid for use in a foreign country must be accompanied by a license from the Board of Dental Examiners of the country or State in which the college granting the diploma is located. The Secretary of State or Governor of the State in which this license is granted, may certify as to the genuineness of this license.

The signatures and diploma should be legalized by the Visee of the Secretary of State in Washington, D. C.

The credentials should be authenticated by a certificate signed by the Cuban Minister at Washington, D. C.

Before embarking for Cuba, passports must be secured. Identification must be made here by a witness who can certify to the American citizenship of the applicant; and three photographs of the same size must be furnished.

Translations of these credentials should be made (at the expense of the applicant by an official translator of Havana, Cuba) into the Spanish

language. They are then ready to be presented to the Department of Public Instruction.

III. If these credentials are accepted, the applicant must then undergo the examinations at the time and place and upon the subjects designated by the Department and Examiners.

IV. We have been informed that these examinations are conducted at the University of Havana, by members of the Faculty, and that they are under medical supervision.

Under the medical regulations, the applicant is allowed five hours in which to write a Thesis.

The examination fee is about $50.00 American gold.

Re-examination after six months, without extra charge, is permitted.

V. Among the subjects included in the Cuban University curriculum, we note the following: Anatomy (Medical), Histology (Normal), Prosthetic Dentistry, Operative Dentistry, Anatomy and Histology, Therapeutics, Materia Medica, Theory and Technique of Crown and Bridge Work, Porcelain Inlays, Histology of the Teeth, Applied Therapeutics and Oral Hygiene, Exodontia, Orthodontia, Special Pathology of the Mouth and Teeth.

VI. We have also been advised that the examinations are strict. The authorities are punctilious about observing formalities.

Address the Department of Public Instruction, Habana, Cuba, for additional details.

VII. It is represented that at the present time the field in Cuba for dentists is fully occupied by both American and Cuban practitioners, many of whom are graduates of dental colleges located in the United States of America.

For information in regard to the prospects of securing a location in Cuba, we suggest that one or more of the following named American dentists located in Havana, Cuba, be consulted: Dr. E. O'Bourke, Compostela 2; Dr. J. B. Dod, Beriaza 3; Dr. G. C. Mizel, O'Reilly 71; Dr. B. L. Rhome, Prada 98; Dr. James Warner, O'Reilly 69; Dr. A. G. Weber, Corales 1; Dr. I. Weber, Prado 38.

We also suggest communicating with Dr. Leandro J. Canizares, Director de la Revista Dental, P. O. Box 1069, Habana, Cuba. This Journal should afford accurate information upon the present needs and conditions of dental practice in Cuba.

CHINA

In reply to many inquiries relative to the Dental Laws of China, we would state that there are no license requirements in China, except such regulations as may be imposed by foreign Protectorates.

China is divided into twelve principal Provinces. It should be recalled that this Empire covers a vast territory, which includes an area

of 1,861,000 square miles in China proper, and a population of 320,620,000.

In considering the Chinese, it is essential that the foreigner, dwelling in his own country, divest his mind of such impressions as casual or unfavorable immigration may convey, transporting himself in fancy to the native land of this perplexing yet marvelous people, whose industry, skill and intelligence have for centuries been the wonder of those familiarized with their character through residence or commercial relations. So much affecting their history, literature, lives, and customs is comparatively unknown to the outer world, that it is difficult to form an adequate estimate of their true status, among civilized nations. The lofty indifference, we must add, with which the favored mortals dwelling in a "Celestial empire" regard the rest of mankind, precludes the familiar intercourse conducive to a proper knowledge of our fellow men, although this exasperating self-complacency has at times been compelled to yield to American address or British bombardments.

Hong Kong.—The conditions imposed on all practitioners render the admission of non-British graduates very difficult. It is evident that the general colonial dental license regulations prevail in this Province and city. That is to say, that the L.D.S. (Licentiate of Dental Surgery) is recognized and registered, provided it is possessed by a British subject. It may have been granted by an English colonial dental school, college, university, body, or the General Council of Medical Education and Registration of the United Kingdom of Great Britain and Ireland, and should be accompanied by a suitable sworn statement of identity and authenticity. Such credentials would undoubtedly be a passport into the most desirable and lucrative clientele in Hong Kong or vicinity. The Chinese population, as a rule, is attended to by native dentists, although in former times Japanese dentists shared in this kind of practice. The fees paid by this class of patients is absurdly small and would hold out no inducements to the American or European dentist to attend to such cases.

It is unlikely that any change would be made in the dental regulations in Hong Kong as the result of the world war, unless they should be enforced more rigorously. Neither is it probable that the unsettled conditions prevailing in other parts of the Chinese Empire, where no dental regulations exist at all, have caused any recent adoption of dental supervision. Each patient is supposed to satisfy himself beforehand of the skill of the dentist whom he may desire to employ.

Application to Chan Kwang She or Yang ye Yung, Chinese Consuls at 18 Broadway, New York City, should elicit the latest reliable native information in regard to the present condition of the country or Province concerned, and the possible prospects there for an alien or foreign-born

dentist, especially for an American dentist, who is a graduate from a dental school in the United States of America.

In those parts of Shantung and Manchuria or elsewhere, under Japanese control, no doubt the Japanese colonial dental law will be enforced; otherwise the Chinese Empire is open to any dentist, who has the courage to surmount the difficulties imposed upon an alien practitioner by that most remarkable people, with such a conglomeration of ideas, so often the reverse of the ideas of civilization prevailing in our land. These ideas are the most unique regarding the practice of medicine and dentistry, of all the vocations pursued by men.

OTHER PARTS OF CHINA

Chefoo.—There are absolutely no restrictions on the part of the Chinese to the practise of dentistry. It is immaterial whether or not the dentist is qualified.

The consul states: "I know of no law governing dentists. Any one can practise. American dentists are the most popular; in fact, for many years they were the only dentists in China. Of late, however, Japanese are competing. There is a good field here in Chefoo for a dentist who wants to build up a practice, as there are no dentists here now."

Mukden.—"As far as Manchuria is concerned, no examination or license is required. Manchuria, however, at present does not offer any hopeful field for American dentists. The number of foreigners resident here is very small and the Chinese are comparatively free from the need of dental services. Whenever they do require them they seem to obtain satisfaction from the Japanese dentists in practice here, whose fees are smaller than an American dentist could afford to charge."

Shanghai.—"There are no laws or regulations as yet governing the practice of his profession by an American or any other dentist in China. No especial value is attached to the diploma of any particular dental college. As long as a man is qualified from a good school and according to the laws of his own country, and is reputable, his efficiency will be the standard by which people will gauge him. Shanghai is abundantly supplied with dentists at present, among whom are several Americans."

PRACTICAL HINTS

This department is in charge of Dr. V. C. Smedley, 604 California Bldg., Denver, Colo. To avoid unnecessary delay, Hints, Questions, and Answers should be sent direct to him.

BLOWPIPE OUTFITS.—Those of the profession who are using gasoline blowpipe outfits know what it means to have to use the low-grade gas that is now on the market.

If the Buffalo outfit is used, the whole tank can be placed in a basin of hot water. If the Brophy (made by Ransom & Randolph), a tin cup can be placed under the carburetor, and then elevated by a little paper box.

The heating by the water will cause the gasoline to vaporize very well, and will give a good hot flame.

Often a poor flame may be caused in a Brophy by the volatile portion of the gasoline being removed, leaving nothing much but impurities, water, etc. This residue may be so great that the carburetor may be full, and still no flame.

To remove it, unscrew the pump, release the inlet valve, pinch the tubing at the blowpipe, and pump vigorously on the foot bellows. This will drive it into the tank, whence it can be poured out, or, if the tank is full shake it up with the rest of the gasoline and go ahead.—W. FONTAINE SAVAGE.

A GOOD WAY.—Patient came in, bringing a denture that had been broken and mended several times, wanting a new denture, and asked that the front teeth be made exactly the same on the new denture as on the old.

As the bite and the occlusion were perfect, the old denture was held together by some modeling compound, softened in the flame, and the plaster flowed on the palatal. When the plaster had hardened, an impression was taken in compound, and trimmed thin on the incisal and occlusal. The plaster was then removed, and the denture placed upon the model, model having been mounted on the articulator.

Softened compound was placed upon the occlusal of the lower model, and the upper and lower approximated, and the compound impression and the compound on the lower united with a hot spatula.

The denture was then removed from the impression, the latter remaining on the articulator. The teeth then removed from the denture, and placed in the impression.

The upper model covered with wax, being built out well on the occlusal and incisal, the two approximated being closed tight.

At the finish, the denture was exactly as before, except for the fact that the patient had a new impression, on account of changes in the mouth, and the whole of new rubber.—W. Fontaine Savage.

Editor of Practical Hints:

A case came to my office a short time ago that presented a similar condition to others I have had in practice, and for some of these a cause could be reasoned out while some caused me to be very much in doubt. The condition I refer to is that of a white chalky soft area showing up near the gum margins, particularly on upper front teeth and in mouths often that appear to be close to normal otherwise.

I have had cases presenting this condition after the patient had been under treatment for rheumatism, and I had assumed that the sudden change in enamel conditions was due to the very strong acid treatment often administered in the treatment of rheumatism. The patient I now have under observation has a clean, well-cared-for mouth, in reasonable health, and saliva tests indicate to me that the mouth is not overly acid or alkaline. Will you please give me some suggestions as to possible cause and treatment or prevention of this sudden and very distressing condition?—F. E. M.

Answer.—I am thoroughly of the opinion that a clean tooth never decays, and am strongly inclined to suspect that these decalsifying surfaces are not kept clean at all times. I should advise greater care in cleansing, and Dr. Pickerell's recommendation that ripe acid fruit be eaten immediately before and after each meal to stimulate the flow of normal alkaline saliva which is the greatest preventive of decalsification or decay.—V. C. S.

Editor of Practical Hints:

Kindly give me your method of duplicating a satisfactory full upper or full lower plate that perhaps have been vulcanized so often that *all* new rubber is indicated.

Also your method of refilling an upper after full recession of gums.—B. R. E.

Answer.—To duplicate or renew the rubber in an old plate: Pour a Spence plaster cast of the palatal or mandibular surface of the plate; then make a plaster impression or matrix of the teeth, embedding them in the plaster about one-half the length of the teeth. Mount on an

articulator. Be sure to set the articulator to maintain the length of bite. Remove the teeth, setting them as removed in their proper places in the matrix, which should be wet to prevent wax from sticking to it. Throw the old rubber away and build up new plate of wax; flask, pack and vulcanize same as new plate.

To refit or rebase an upper plate: Trim margins low enough to free them entirely from muscle pull. Take a closed bite impression, adapting Hall impression tray compound around the rim of the plate and post-damming across the palate. Trim compound to relieve all muscle tension. Fill plate with a very thin mix of Snow White Model Plaster; insert, having patient incline head slightly forward. Have patient close and open repeatedly and rapidly half dozen times, then hold still and relax the muscles of the cheeks and lips, while you pat and smooth them into normal contour. Remove when plaster is thoroughly hard by moistening around the periphery with a water syringe, and having the patient hold the lips closed while he blows the cheeks full of air. Pour a Spence cast, remove plate from cast, cut out palate with a band saw, and cut away buccal and labial portions of impression, exposing and freshening surface of rubber of old plate. Leave enough impression of ridge to reseat accurately on cast. Wax in palate and periphery to correct contour. Flask and finish. The remaining portion of the impression is removed and the balance of the surface of the old rubber is freshened before packing in new rubber.—V. C. S.

Editor of Practical Hints:

Can you tell me if there is any way of sterilizing used modeling compound in order that it may be used again?—F. P. Simpson.

Answer.—I cannot answer this question, but will publish same hoping that some other reader may give us a satisfactory method.—V. C. S.

Editor of Practical Hints:

I have a case on which I would like very much to have some advice. Patient, 16 years old, but very large for age—about 5 feet 11 inches tall and well built. Last January her mandible became dislocated while asleep, and has been that way ever since. It is protruded as far as is possible, making the chin very prominent. Would you advise putting it back in the proper place after being dislocated so long?—J. B. Nelson.

Answer.—The mandible should be set in its proper place by all means, and the sooner the better. It is a simple thing ordinarily to set a lower jaw: Stand directly in front of patient who should be sitting in a low chair. With a folded towel between your thumbs and the lower molar tooth, with heavy pressure force the jaw downward and back-

ward until the condyle slides down over the eminentia articularis and back into the fossa. In this case it would undoubtedly be well for the patient to wear for some days, and especially at night, a bandage or harness fitted simply around the chin and over the crown of the head.—V. C. S.

Editor of Practical Hints:

Would you kindly give me accepted description of the so-called Porcelain Jacket Crown usually used upon anterior teeth. I have heard this question asked a great many times on State Board examinations, etc. I am planning upon taking one soon, therefore would like your expert description through THE DENTAL DIGEST as soon as possible.—C. A. DITTRICH, D. D. S.

ANSWER.—I am not in touch with State Board questions or answers, but I can describe a method by which Porcelain Jacket Crowns can be successfully made. Tooth should be ground cone or peg-shaped with a definite shoulder just above the gum line. A copper band is approximately fitted to this prepared tooth inside of which an impression is taken with modeling compound.

With this in place an impression and bite are taken. The impression of the prepared root is packed with a silicate cement with a root-like projection to be imbedded in the plaster cast when case is poured and mounted on articulator. The silicate root should be oiled or waxed so that it may be removed from cast when hard.

Platinum foil is conformed to this silicate reproduction of the prepared tooth. High fusing porcelain powder is built upon the platinum matrix to correct contour and same is baked in an electric porcelain fusing furnace.—V. C. S.

Editor of Practical Hints:

Will you please advise as to following: Very often in taking out nerves by infiltrative anesthesia (novocain), patient returns with severe soreness. My method is as follows: Clean pulp canal and pack with dry absorbent cotton; 48 hours latter place a campho-phenol treatment, and at end of another 48 hours fill pulp canal. Is there anything in the first two steps that should cause soreness and how can it be prevented?—J. M. WISAN, D.D.S.

ANSWER.—Instead of packing canal with dry cotton, place a loose cotton dressing saturated with the liquid ingredient of Dr. R. J. Gardinier's Pulp Preserver. Twenty-four or forty-eight hours later, instead of the campho-phenol treatment, canals may be permanently filled.—V. C. S.

Editor of Practical Hints:

I am sending you a film, and wish you would help me diagnose the case. Patient (a lady about 30) complains of soreness on upper right first bicuspid. I treated and filled canals about two years ago. Picture seems to show dark area around second bicuspid which is vital. What shall I do?—Dr. L. H. Lintz.

Answer.—Your X-ray is pretty dim and indistinct, but it is my opinion that the dark area above the apex of the second bicuspid is merely the antrum shadow. It looks to me, however, as though there is a secondary shadow close in about the apex of the first bicuspid, and while your filling is probably as good as could be placed in this narrow necked first upper bicuspid, which usually has a bifurcated root and two very small canals; still it does not go to the end of the root, and in all probability the soreness is due to infection from this source. I should advise the extraction of the first bicuspid explaining that the X-ray shows an unusually good effort was made to fill the roots perfectly at the time it was treated, but that with this particular tooth it is frequently impossible to fill clear to the end and that in fact it is always possible with any dead tooth to have pus infection develop at the end of the root.—V. C. S.

CORRESPONDENCE

Editor DENTAL DIGEST:

Your elegant statement and the timely letter in January DIGEST, "The State Board and the Service Man," are highly appreciated just now.

Every dentist who was in active service during the late war and has received an honorable discharge should thus have credentials enough to allow him to practise dentistry in any state, territory, or possession of the United States of America without further examination for a state license to carry on his profession.

No body of men responded more promptly, served more loyally nor rendered a greater service to humanity than did the estimable men in the Dental Corps of our Army. Men of high morale, adjusting themselves to trying and difficult conditions, rendered conscientious and skilled service. Not only this, but the 5,000 commissioned officers in the Dental Corps put dentistry on the map of the world.

Only those of us who were in the service know the feel of the tug on the heart strings in leaving our loved ones to go to do our bit (no one knew where), sacrificing our offices and practice and many of us our homes. Of course, we received the praise of all and prayers of many, then returned only to find the frailty of humanity of today demonstrated in selfish indifference.

Many "stay-at-homes" of our profession waxed fat while we were away, and at the conclusion of hostilities their offices and homes were intact—ours had been sacrificed.

What are we going to do about it?

DELMAR.

Editor DENTAL DIGEST:

The DIGEST has been a welcome visitor to our office for a number of years, and I was very much interested in a letter in the January issue concerning the need for a Federal Examining Board. Although resident in Canada, a "foreign" country, in so far as the best interests of the Dental Profession are concerned there ought to be no boundary line, even at the 49th parallel, to any man who has demonstrated before a properly constituted Board that he is or will be competent in the practise of his profession.

In Canada we have had for fifteen years a Dominion Dental Council composed of one representative from each province, which conducts

an annual examination at exactly the same time in one central place in each Province. Any candidate who has successfully passed this examination is allowed to practice in any Province by simply paying the regular registration fee of that particular Province.

This scheme has worked well since its inception here.

Why cannot a similar one work in the U. S. A.?

CHAS. W. PARKER.

Editor DENTAL DIGEST:

After reading your note, and also the letter from one of our discharged Army dentists, in the January DIGEST, I feel like adding a few words of approval.

As to the quality of dental work done in the Army, I can say but little, not having been there. However, I have heard much unwelcome comment from discharged soldier boys as to the dental treatment received. Personally, I believe the fault lies not with the individual dentist, but with our Government not seeing the need of furnishing enough dentists and equipment to take care of our entire Army. Had there been enough dentists to do this, there would have been a different story to tell. We must remember that our Army dentists worked under many conditions that lacked the ordinary conveniences we at home were enjoying.

Now as to our Dental Laws. I have always believed that if a man received his required dental education in a reputable and recognized dental school, and passed his final examination satisfactorily and before a National Dental Board (or some form of higher Board) he should be at liberty to practise dentistry in any State in the Union.

I am not suggesting methods of how this Board should be organized or should operate, but I do want to go on record as saying that some form of Board that allows a dentist to successfully pass it should extend Federal rights instead of only State rights. To me this is the only fair and democratic procedure.

J. L. PICKARD.

Editor of DENTAL DIGEST:

I also am an ex-Army dentist and have just read the article in the January DIGEST by a brother Army dentist, and I heartily agree with the Editor's note.

I left my practice, home and family to serve the colors, and the greater part of my service was in France. I made sacrifices and losses by so doing that only time can adjust, not that I regret it—No—a thousand times No! While I know of other dentists who could have gone more easily than myself, for they had fewer dependents, they

stayed at home and enjoyed home comforts while we waded in mud "over there" and did the best we could to alleviate the suffering lads.

There were not half enough of us for the work, but those who were there did the best we could and our conscience is clear.

Uncle Sam required no "State" license to work in the various states; one was sufficient. While working for him I practised in Louisiana, New York and France, although I did not have a state license in any of these states. If I were qualified to practise for him in those states without taking a special state examination, why am I not entitled to do so now?

As a token of appreciation of our services, I think that the various State Boards would not be criticized for presenting all ex-service men, who so desired, the privilege of practising in their respective states without the necessity of taking the usual examination.

As far as that is concerned, the time is now here to have Federal examinations giving any man the privilege of practising in any state, providing he can pass the required examination.

Now what State Board is going to be first in coming forward to extend this courtesy to the ex-Army dentists?

ELMER C. BRIGHT.

Editor DENTAL DIGEST:

On returning from the Army I was placed in practically the same position as the writer of letter in the January DENTAL DIGEST, and now feel that it is time something was done in regard to State Board Laws.

I have been in practice five years, have two State Board licenses and served with the Army. After being discharged I wanted to go to another state (Washington) for which my licenses were not available, but was refused admission without undergoing an examination which would not be held for several months.

If the members of the dental profession appreciate our services in the Army, as they tell us they do in dental meetings and dental magazines, I am sure this injustice will eventually be corrected.

RICHARD D. KELLY.

Editor of DENTAL DIGEST:

Under the heading of "Correspondence" in the January issue, you ask for opinions on the question, "The State Board and the Service Man." I am taking this opportunity to ask another question to which I wish some one would give me a *reasonable* answer.

Like the writer of the article, I volunteered my services shortly after this country entered the war and served almost two years in the

Army. It was my misfortune never to reach the other side, but during that time I practised dentistry in several states—Georgia, South Carolina, and New York, and had I been ordered to, might have added Alaska, Panama, California, Maine or Washington.

Considering the fact that I was good enough to practise dentistry for the Army during the war in the several states mentioned, WHY am I not good enough to practise in any state of the Union now that the war is over, without the necessity of having to undergo a State Board examination in the state in which I wish to practise?

I believe an explicit answer to the above question will be appreciated by a number of ex-service men. The reason that such a privilege granted to ex-service men would be class discrimination is not a satisfactory answer to me.

G. G. S.

Some Timely Questions

Editor DENTAL DIGEST:

Why is it that the National Dental Association allowed the Volstead Bill to go through and ignore the dentist in the writing of prescriptions for whiskey?

Do we not have lots of human suffering presented to us where a little whiskey can be used?

Does not the Government allow us to write order forms for cocaine, opium, etc, for use in our business?

Did not the Government rank the dentists in its Army and Navy the same as physicians?

Why do we stand for things of this kind in our laws?

Cannot some action be taken to remedy these restrictions on our profession?

A DENTIST.

A Word to Anonymous Writers

If "Bert L. from Missouri" will send his name and address to this office, the article on a "Federal Board of Dental Examiners" will be published, but not otherwise. THE DENTAL DIGEST does not publish anonymous communications, but will withhold writer's name when requested to do so.

Will the writer who signed himself "Harry, D.D.S.," please send his name and address to the DENTAL DIGEST, so that the article he sent in can be published.

DENTAL ECONOMICS

Always Quote a Definite Fee for Constructive Work

By Harry J. Bosworth, Chicago, Ill.

SO GREAT is the importance of having a definite understanding about the fee for constructive dentistry before work is started, that it cannot be over-estimated. Never make a sliding scale estimate, as the patient's viewpoint is usually the lower price quoted. Every diagnosis should be based on a complete set of X-ray pictures, a study model, the history of the case and a clinical examination for which a fee at a profit can be charged. After the diagnosis, outline to the patients as clearly as possible, what you would advise in the way of restorative work, using the study model, a reproduction of their own mouths and the full set of X-ray pictures to visualize to them, step by step, what you propose to do. Set up these findings as you go along on the examination or diagnosis blank prepared for the purpose, and try to mentally determine how long it will take to do the constructive work. Then add to this sufficient time to be fair to yourself and provide for mishaps and surprises, which present themselves in most every case. Figure the price per hour (both chair and laboratory time) you must get for your services, to care for your needs, and provide the gross earnings per year you feel you are entitled to. Then quote a flat price for the constructive work *plus treatments,* which must be paid for as the work progresses.

To be sure your estimate is fair to yourself and to your patient, keep accurate time with a time stamp, recording on a daily efficiency and day-book sheet every step up to the completion of the work.

When you have recorded and checked back on several of these cases you will learn to estimate work on a basis fair to all concerned, and if there is lost motion it will soon show up and you can correct it in the next estimated case or in large cases involving quite a diversified lot of work which the patient decided to have done. I would always follow up same in a letter to the patient, so that if he did not understand the arrangement as you had outlined it to him, it will give him a chance to come in again and clear up any misunderstanding.

When this is done you are ready to go to work, and there will be no chance for money misunderstandings to interfere with success of the

work, which so often happens when the patient's viewpoint and the dentist's fee are so far apart. It surely is unsatisfactory to have a real piece of dentistry misjudged and condemned because the price comes up for adjustment. Eliminate the money affairs and then the work is the only thing both patient and operator have to think of, which is an ideal situation. Indicate to the patient the terms of payment, so that you will be getting some money in on the 10th of every month, as statements should go out on the first of every month for all work complete or incomplete up to that time. In this way the patient can pay in smaller amounts, which is agreeable and easier for the average patient, and when the work is completed the patient is a part owner in the case and will naturally try to co-operate with the dentist to make the case a success.

Any construction work, which is only patch dentistry at the best, pleases and fits better when it is paid for. Don't take any chance on having a misunderstanding over fees when it can be avoided in every case by following this plan.

When the Salesman Falls Down on His Promise

By Elton J. Buckley, Philadelphia, Pa.

(Readers of The Dental Digest are invited to submit questions of a legal nature to Elton J. Buckley, care of the Dental Digest. This service is free.—Editor)

From San Francisco, Cal., comes the following letter:

> A firm sends out a traveler to sell goods. He goes to A, sells him, and A gives him notes for payment of same. The traveler states to A, "When these goods, or machines, come, I will be here and show you how to operate them and help sell them." It is with this understanding A takes them and gives his notes.
>
> The machines (phonographs) come to hand. The company never sent the promised man to A to sell or show him, as the traveler told A he would.
>
> But they did not forget to send the notes for collection. A refused to pay the notes. This very same company did the same thing with B and B refused to pay the notes. In one of the cases B has two witnesses to the contract. I think it's false representation by the traveler and the company is responsible for their representative in the matter.
>
> Please give your opinion.

Hardly a week goes by in my practice without my being consulted or written to by somebody who has bought goods from a salesman and has failed to get all that the salesman promised. The above is a typical

case. A salesman will promise, as he did in the case submitted, to come back and help get orders, or to give free goods, or to make a certain number of free window displays, or to send a quantity of advertising matter, or to send premiums, or give discounts, or to do any one of innumerable other things. The order is signed on the strength of the promise, and the promise is not kept. The salesman's employer repudiates it, either because the salesman denies having made it, or because he had no authority to make it. And the buyer considers himself defrauded because often the very thing he bought for is not forthcoming.

What is the buyer's remedy?

Of course, the best remedy is the ounce of prevention. Read the order, and if the special promise the salesman is making is not in it, insist that it go in. Take no excuse whatever for not putting it in, nor any such promise on the salesman's part as to "write you a letter about it tonight; there isn't room enough to put it in the order." That actually happened in one case. The buyer signed the order, but the letter never came.

Get it all, every word of it, in the order. Once it is in, you are protected, because if the salesman's employer accepts it that way, of course he is bound. If he rejects it, you save your money.

But where that isn't done, what is the buyer's status? I assume that in the case cited, as in many others, the original order contained nothing about the salesman giving his services. If it did not, the buyer has no status to demand anything except what the written contract provided he should get. It is a familiar rule of law that where the parties to an agreement have put it in writing, no evidence can (usually) be introduced to change or enlarge it. That rule applies here—the buyer would get nowhere if he refused to pay for his purchase on the ground that the salesman had agreed to help him sell it. The court would ask him to point to anything in the written contract which covered the salesman's services, and if he started to explain that that was verbal, his mouth would be closed at once. If he could point to nothing in the written contract, judgment would unquestionably be given against him.

In such a case the salesman's employer is not bound by any verbal agreement which the salesman made, not appearing in the written contract. To bind the employer, you must show that he knew about the verbal agreement and authorized it.

Nor have you any *criminal* action against even the salesman. He merely promised something which he did not perform. That is not a false representation, any more than it is one where a man signs a promissory note which he doesn't pay. You have, however, a civil action for damages against the salesman—if you can find him—but it wouldn't help much.

In this case, and in many others, the buyer signed notes. That was

the most foolish move of all, because the minute he did that, he was shorn of all defense. No matter how good a defense he might have had against the person he gave the notes to, he has none against the third person to whom that person transferred the note. That is another familiar rule of law.

But the fact that the house refused to give something that the salesman had promised would not be a defense against anybody, if the promise had not been included in the written contract.

In a nutshell:

1.—Get *everything* in the written contract or order.

2.—*Never* sign notes for any purchase in advance, unless you are well acquainted with the seller, and there is some satisfactory reason for asking for notes.

The Lady Dentist

So dentistry is to become one of the new careers for women! Well, as a mere male, I can see both sides of that possibility. It is conceivable that the thought of a charming lady in waiting with the chattering drill for the nerves of our teeth might disarm that morbid terror which so often puts us to flight on the very doorstep of the dentist. On the other hand, if the lady looked hefty enough to give confidence in her powers of extraction, some of the charm might be missed. I have suffered under a dentist who was assisted by his spouse, and I am bound to say that her hovering presence compelled me, for very shame, to put a braver face on the torture.—London Paper.

The Glad Heart

I thank Thee, Lord, that I am straight and strong,
With wit to work and hope to keep me brave;
That two score years, unfathomed, still belong
To the allotted life Thy bounty gave.
I thank Thee that the sight of sunlit lands
And dipping hills, the breath of evening grass—
That wet dark rocks and flowers in my hands
Can give me daily gladness as I pass.
I thank Thee that I love the things of earth—
Ripe fruits and laughter lying down to sleep,
The shine of lighted towns, the graver worth
Of beating human hearts that laugh and weep.
I thank Thee that as yet I need not know,
Yet need not fear, the mystery of end;
But more than all, and though all these should go—
Dear Lord, I thank Thee for being such a friend.

N. Y. Times.

DIETETICS AND HEALTH

Get Acquainted with Your Pineal Gland

PROBABLY there is no book for which dentists and medical men generally have more respect and reverence than "Gray's Anatomy." Nearly everything within its covers has remained unchanged and practically unchallenged for over half a century. However, the unexpected has happened.

A most remarkable and interesting volume entitled "The Mystery of Space" has recently made its appearance, and has succeeded in creating widespread astonishment among scientific readers and thinkers. The author, Mr. Robert T. Browne, is essentially a mathematician, and displays his mathematical skill in demonstrating various intricate theories throughout the book. However, he does not entirely shut out those not versed in the mystery of figures, as his opinions on many interesting questions are set forth in a manner sure to please even those who never indulge in euclidean pastimes.

Gray's Anatomy says of the pineal gland:

> "The pineal gland is a small reddish-gray body occupying the depression between the two superior quadrigeminal bodies. It is an outgrowth which is not regarded as an important neural ingredient of the human brain, and is generally believed to be a rudimentary relic, representing a cyclopean eye of some extinct ancestral vertebrate."

This description medical men and scientists generally have been willing to accept for many years past. But when Mr. Browne takes up the consideration of the pineal gland, his notion of its function is an entirely different story.

To avoid possible misstatements this interesting story will best be told by quoting the author's own words. He says:

"Recent scientific investigations and the results obtained therefrom have begun to turn our attention to the activities of two very small organs situated in the mid-brain, and known as the *pineal gland* and *pituitary body*. These organs, and especially the pineal gland, hitherto supposed to be a vestige of the past, are now recognized as rudimentary organs belonging to the *future evolution of humanity*.

"It is now known how subtle is the physical connection between these two bodies—the pineal gland and the pituitary body; at last it is seen how profound is the effect which the latter has been demonstrated, in a measure, to have over the entire bodily economy; but there is even other testimony to the effect that those gifted with the inner vision can observe the 'pulsating aura' in each body, a movement which is not unlike the pulsations of the heart and which never ceases throughout life.

"The pituitary body is the *energizer* of the pineal gland and, as its pulsating arc rises more and more until it contracts the pineal gland, it awakens and arouses it into a renewed activity in much the same manner as current electricity excites nervous tissue.

"Attention is here called to these phenomena, and the conclusions drawn therefrom are offered as a means of directing the probable line of investigations which will establish the direction which we shall pursue and the source whence we shall find outcropping the new faculties and their organs of expression.

"It can be said with confidence that whatever in the future may be learned as to the physiologic functions of the pituitary body and the pineal gland, it suffices to know that it is *life* which they express and that, too, in a far superior manner than any of the other sense organs. The *modus* of these two glands differs in a very marked way from that of the organs of sight, hearing, taste, smell and feeling. These latter are designed for contact with the external, objective world of sensations, their growth and evolution being dependent upon stimuli received from without, while with the former the case is far different—in fact, just the opposite.

"The mode of life of the pituitary body and the pineal gland instead of receiving sustenance and impetus from external stimuli is rather dependent upon impacts received from the Thinker's own consciousness and made to impinge upon them by an exclusively interior process. Indeed, they seem to act as a switchboard for the regulation of the flow of the current of life through the body.

"There are those who, presumably basing their assertions upon actual observation and knowledge, unqualifiedly assert that in order 'to gain contact with the inner worlds all that remains to be done is the awakening of the pituitary body and the pineal gland. When this is accomplished man will again possess the faculty of perception in the higher worlds, but on a grander scale than formerly, because it will be in connection with the voluntary nervous system, and therefore under control of the will. Through this inner perceptive faculty all avenues of knowledge will be opened to him and he will have at his service a means of acquiring information compared with which all other methods of investigation are but child's play.'

"Humanity has come into possession of its various faculties of mind

and powers of physiological functions by insensible degrees, the higher always being held in abeyance until the lower is fully developed. These facts have been amply demonstrated by the science of embryology, which shows that the history of the development of the individual is a recapitulation of the development of the species.

"And so with the mind. The constant upreaching yearnings of the Thinker through his intellect for greater freedom and a larger scope of action, the desire to peer into the mystery of life, the infantile outfeelings of the mentality after some safer and surer basis for its theory of knowledge cannot fail in producing not only the faculty or power to satisfy these cravings but the very organ or medium by virtue of which the satisfaction may be attained.

"It is not without full knowledge of the fact that it has been customary among many scientists, or perhaps all of them, to regard these bodies, at least the pineal gland, as vestigal organs belonging to the past of human evolution, that we make these assertions. Yet as man proceeds in the perfection of mechanical science, in the development of instruments of precision that aid his external senses, responds more and more to the subtle vibrations, teeming everywhere in the atmosphere about him, and comes, in the course of time, naturally to possess a more sensitively-keyed nervous mechanism, a finer body and higher spiritual aspirations, there will be a corresponding widening of his scope of vision and the attainment of larger powers of perception which must inevitably tend toward a deeper and truer knowledge.

"What if it were possible that the scientist, when he had carried instruments to their utmost precision and penetration, should suddenly, or otherwise, be endowed with a clear perceptivity of sight, hearing and smell, so that he could with his own powers of vision, feeling and hearing take up the task where the microscope, the microphone and the micrometer left off, and delve into depths far too unfathomable for his appliances, perceiving the innermost realities of things and processes?

"What if it were possible for him, with these added powers, to see and examine without the aid of the magnifying lens the electron, the atom and the molecule? What if he could sense with his own inner vision, the ultra-violet and the infra-red rays? Think you not that such direct contact, such immediate and uncontrovertible knowledge would be far superior to any advantage which his manufactured devices now bestow? Who can doubt it?

"Before this step is taken, however, and before the passage from mechanics to biogenetics is made, *as made it must be,* man must win a complete mastery over matter. But this he will do; for more and more he is learning to put all those forms of labor which are so exacting as to leave him no time for the development of higher powers, into the hands of machinery. He will not be free until he has done this well-

nigh completely. This is the task of the intellect, and with it man must win his way to these higher faculties which are destined to succeed the intellect, whereupon he will be ushered out of a life bound and restricted by mechanics to a life of unimaginable freedom—the *intuitive life*. Indeed, it is not too much to predict, that even the need of our language will pass away; for man will have outgrown the use of signs and symbols in his communion with his fellows and will use the language of intuition—direct and instantaneous cognition. Man, for whose highest good these ultimate changes will come, will be a better man, and humanity shall evolve a new race."

The Fountain of Youth

Ponce de Leon sailed across the ocean to find the Fountain of Youth. And who would not gladly sail the seven seas unending, if at last he would come to such marvel, and baptize his wrinkled soul in its benign waters?

I would, for one. And all the multitude of the disillusioned would crowd my ship, says Dr. Frank Crane in N. Y. Globe.

But in vain. One by one we should all perish on wild shores, and our whitening bones would be landmarks of fatuity.

Not that there is no Fountain of Youth. There is. But it is not to be come to by sailing.

It is in the same place as the Land of Content, and the End of the Rainbow, and the Goal of Souls.

That is to say, it is in the place known as HERE. And not at all in the far country of OVER YONDER.

In my heart is the Fountain of Youth. And in yours and every man's.

I do not say it may be there, or by some miracle be caused to flow there. I say it is there; although, alas! in most of us hidden under rubbish of ignorance, concealed by brambles of fear, often filled up with dirt of septic ideas, and the very place thereof shrouded in the mists of Maya (which is our ancient word for Delusion).

Dig down to the Eternal Verities and you will uncover this sweet Fountain. Find Nature, which is God's other name, and is strong and good and full of health. Find Humanity, which is another of God's titles, and is of wondrous soundness.

The Great Truths are all Youthful. It is Lies that are decrepit.

It is not Years but Fears that make us grow old.

It is Faith that keeps the wrinkles out of hearts, and it is Doubt that brings senility and rots our bones.

And it is Love that is the Resurrection Fact. For it is Love that peoples Heaven since if we did not love we should not persist in believing in immortality.

Beauty also has the secret of eternity. Did not the poet say that "a thing of beauty is a joy forever?"

So that if you can return to the simplicities of Beauty, and learn to thrill at the sound of falling waters, send your soul up to soar with the birds, and get drunk upon the red wine of sunsets, you have discovered the Fountain.

Within you is that Fountain. Retrace your steps, and fare backward into your Self. Clear away Fears, Doubts, Hates, Worries, and all the bitter things you have created to bedevil yourself withal.

Deep in the centre of your Self is the Fountain of Youth. You will know it; for there by it sit the three sisters, Faith, Hope and Love, the rock from which it gushes is called Truth, and the secret reservoir that feeds it forever is none other than God Himself.

A Well-Made Day

Take a little dash of water cold,
  And a little leaven of prayer,
And a little bit of morning gold
  Dissolved in the morning air.
Add to your meal some merriment,
  And a thought for kith and kin,
And then as your prime ingredient
  A plenty of work thrown in.
But spice it all with the essence of love
  And a little whiff of play;
Let a wise old book and a glance above
  Complete the well-made day!

March

The stormy March has come at last,
With wind and cloud and changing skies;
I hear the rushing of the blast
That through the snowy valley flies.
Ah! passing few are they who speak,
Wild stormy month in praise of thee;
Yet, though thy winds are loud and bleak,
Thou art a welcome guest to me.
For thou to northern lands again
The glad and glorious sun dost bring,
And thou hast joined the gentle train
And wear'st the gentle name of Spring.

BRYANT.

EXTRACTIONS

The years, like flivvers, rattle by.

It is said that a French dentist has invented paper teeth.

Common sense extracts more solid comfort from life than genius does.

Women will never make good on juries until they get to be as ignorant as men.

There are no shade trees and hammocks scattered along the road that leads to success.

Some people seem to know everything except the fact that they don't know how much they don't know.

One of the things that uses up a person's time is thinking about what one will do when one has time enough.

Say what you will women are tender-hearted and considerate. You never saw a woman deliberately step on a mouse, didja?

(Jones)—Did you swear off this year?
(Smith)—Is that an academic question, or have you something in your hip pocket?

The "tired business man" explains it this way: "I went down to Atlantic City for a little change and rest, but the waiters got all the change and the hotel owners the rest."

Newton had just discovered gravity.
"I am now in a position," he said, "to write for the British comic papers."
Just then another apple hit him on the head.

(Patient)—You told me these false teeth would be just as good as my natural ones, and they hurt me fearfully.
(Dentist)—Well, didn't your natural ones hurt you?

While many serious changes in our affairs can be charged up to the "high cost of living," it is some consolation to know that we can still get five pennies for a nickel.

Once a year the newsboys of a certain district in London are taken for an outing up the Thames by a gentleman of the neighborhood. At this time they can bathe to their hearts' content.
As one little boy was getting into the water a friend observed, "I say, Bill, ain't yer dirty!"
"Yes," replied Bill. "I missed the train last year."

SEE WHO'S HERE

I am more powerful than the combined armies of the world.
I have destroyed more men than all the wars of the world.
I am more deadly than bullets, and I have wrecked more homes than the deadliest of siege guns.
I steal, in the United States alone, over $300,000,000 each year.
I spare no one, and I find my victims among the rich and poor alike; the young and old, the strong and weak; widows and orphans know me.
I loom up to such proportions that I cast my shadow over every field of labor from the turning of the grindstone to the moving of every railroad train.
I massacre thousands upon thousands of wage earners in a year.
I lurk in unseen places, and do most of my work silently. You are warned against me, but you heed not.
I am relentless. I am everywhere: in the home, on the streets, in the factory, at railroad crossings, and on the sea.
I bring sickness, degradation, death, and yet few seek to avoid me.
I destroy, crush, maim, take all, and give nothing.
I am your worst enemy.
I am Carelessness!

THE BEST OF CURRENT THOUGHT

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Dentistry and Scholasticism

NEVER was there a time when dentistry was as jealous of its attainments as at the present moment. Because of the far-reaching effects of mouth ailments the dentist has been invited into the field of general pathology to discuss conditions that a few years ago not many dentists would have attempted had they been invited, and it is very probable that they would have been deemed ineligible to the discussion. By the same token his endeavors in other subjects have become co-extensive. A natural sequence has been a deepened and activated interest in educational attainment. Dentists are reading widely to fit themselves for the new epoch, schools are extending their courses and necessarily demanding better preliminary training of their registrants. Certain it is that the better dental schools are lifting their scientific courses above the plane where they were a hollow mockery to a position commanding respect. To illustrate: No school deserving the name attempts to teach physiology without a laboratory course. Men who know the subject and pedagogy recognize the impossibility of such a thing. Also schools are beginning to recognize that they have no right to present to students a non-negotiable course, a course that other than dental schools will not recognize. Schools that are integral parts of universities are being held to the same standards of entrance scholarship and of teaching as other units of those universities. The student has rights to him inalienable that the school must respect. Dentistry is sensing the aroma of scholasticism.

But in the transition there is danger. Always the coin of the realm is counterfeited. Always the counterfeit is to be repudiated. There is the danger of the "little learning," a real danger it is true only to its possessor but which aspires often to untenable places and seeks the public approval of the profession. The counterfeit, the glitter of "fool's gold" cannot have the signature of present-day dental education. At this particular time when effort strenuous and sincere is being made to place the profession where it deserves to be, it should be guarded against the charlatanism of those who would prate of themselves under titled forms or describe themselves in academic terms that taken seriously are pathetic, but which we believe are looked upon generally with amusement. For instance, we have in our midst an academy which is entirely devoid of academicians. We are inclined to marvel at the assumption. Should such a thing be mentioned where the well-nigh sacred lineage of the term is appreciated we wonder what the reaction would be. The profession can ill afford recognition to such a thing.

Also there is the tendency to the display of newly made, badly made, entirely unnecessary terms, terms that seem to be constructed and used entirely for their sound. Neither size nor sound is deemed a rhetorical

asset necessarily. Doubly true is it when a simple form is entirely adequate. There is no need for the supplantation of the effective, accepted term by some monstrosity in verbal concoction. Thus ever and anon we see periclasia, periodontoclasia, apioectomy, most recent of all pediadontia, and kindred forms. The whole assortment savors of glass diamond effects; it reminds one of the oratory heard in the colored chapel of days gone by. Big words have always been the playthings of the illiterate. Extraction is always better than exodontia, resection is honored by surgery and is adequate to dental needs. Apioectomy is an atrocity than which apicoectomy is slightly better. True it has been cannonized in some medical dictionaries, but the Committee on Nomenclature will explain the difficulty they have restraining the publishers from printing anything that might help sales. Periclasia makes a hollow pretense but has its roots in nothingness. So on to the end.

The Journal desires above everything to speak the findings of the profession and give to the world its pronouncements, but it desires to conform to a standard that reflects credit upon its own pages and the profession. As the official mouthpiece of our national organization it wishes to present dentistry to the world with dignity and respect, and in the future will employ such terms as those approved by our own commission on nomenclature.—JOURNAL NATIONAL DENTAL ASSOCIATION.

A Teeth Miscellany

SPECIFICALLY speaking Miscellany means "a mixture of different sorts of meats," or "a combination of diverse objects, parts or elements," and would appear from a literary point of view, like charity, to cover a multitude of sins. It is small wonder, then, that the journalist ever cherishes a warm spot in his heart for the miscellany, for there are all sorts of small scraps of information on all sorts of subjects which only lend themselves to treatment in this form—a form which enables the writer to assemble and arrange his material, and eventually publish it with some semblance of unity.

In the past there have been all sorts and conditions of miscellanies on practically every conceivable subject, so why not a Teeth Miscellany? Certainly the subject is important and far-reaching enough to justify such a course, while the many little anecdotes anent the tooth ought not to be allowed to sink into obscurity because they are each self-contained and not sufficiently long to warrant a separate article each. Besides, there is a homeliness about the miscellany which cannot be gainsaid!

Nowadays skilled operators, working with fine instruments, aided by anæsthetics, have done very much to diminish this ill that flesh is heir to. In the days before dentists, however, tocthache was indeed a terrible matter. On one of the Early English capitals in Wells Cathedral is a huge carving representing the contorted face of a man who with one hand is pulling away his cheek from his gums, for all the world as if making way for the insertion of the forceps. This carving is locally known as "The man with the toothache."

In that famous work "The Annals of Japan," written in the eighth century, mention is made of an Emperor whose name, Midzuhawake, or Prince with Auspicious Tooth, is said to have been given him from his having the so-called teeth in a single piece. A correspondent to *Notes and Queries* a few years ago stated that when he was an infant he had heard his old master narrate that a knight in the Province of Kii, called Hagui Oniemon (Strong-Bites Demon), had a set of teeth of such a conformation that he was able to bite off an iron pan! Again, in the "Life of Pyrrhus," Plutarch says that "instead of teeth in the upper jaw, he had one continued bone, marked with small lines resembling the divisions of a row of teeth."

Herodotus has a passage referring to the subject which states that, after the Persians' overthrow at Plataea, among human abnormalities noticed when the dead bodies were bared of flesh "there was discovered a jaw, and the upper jaw had teeth growing in a piece, all in one bone, both the front teeth and the grinders." It should be noted that it was to the upper jaw that the growth of the single tooth was apparently restricted.

In regard to this same matter, an American correspondent mentions that several members in two generations of a certain Connecticut family had no teeth proper. The gums were replaced by an undivided ring of tooth substance, prolonged upwards to the height of ordinary teeth, and were used in all respects as such.

Before now, persons have been credited with having actually been born with teeth, and the ill-famed crook-backed Richard III. is among these. It should be mentioned, however, that this statement is made solely upon the authority of Shakespeare, and it has been suggested that the poet and dramatist was really characterizing some other personage than Richard in his play. Some have expressed the opinion that this characterization refers to the Earl of Salisbury. In Samuel Rawson Gairdner's "History of the Life and Reign of Richard III.," the following passage may be found: "He (Richard) left such a reputation behind him that even his birth was said to have proclaimed him a monster. He had been two years, we are told, in his mother's womb, and was born—or, rather, like Macduff, was by a surgical operation separated from his mother's body, when he came into the world feet foremost—with teeth in his jaws and with hair down to the shoulders."

A curious tooth story is told by William Hone is his well-known "Table-Book": In 1593, it was reported that a Silesian child, seven years old, had lost all its teeth, and that a golden tooth had grown in the place of a natural double one. In 1595, Horstius, Professor of Medicine in the University of Helmstadt, wrote the history of this golden tooth. He said it was partially a natural event, and partly miraculous, and that the Almighty had sent it to this child, to console the Christians for their persecution by the Turks. In the same year, Rullandus drew up another account of the golden tooth. Two years afterwards Ingosteterus, another learned man, wrote against the opinion which Rullandus had given on this tooth of gold. Rullandus immediately replied in a most elegant and erudite dissertation. Libavius, a very learned man, compiled all that had been said relative to this tooth, and subjoined his remarks upon it. Nothing was wanting to recommend these erudite writings to posterity but proof that the tooth was gold: a goldsmith examined it, and found that it was a natural tooth artificially gilt!

It is on record that some thirty to forty years ago a drain was made across the northern portion of Bottesford churchyard, in which burial-ground no interments had been made for a considerable period—some say since the Reformation. During the process of the work some thirty skulls were dug up, and by far the greater part of these possessed perfect teeth. Among them was one remarkably small skull, in which, though every tooth was in its place, and every one of them sound, they were yet all very much worn—so much so as to suggest that the food

eaten for many years was of a very hard quality. Specialists who examined the teeth came to the conclusion that the skull belonged to a very old woman.

An interesting little note regarding the drawing of teeth by blacksmiths was contributed to *Notes and Queries* some few years ago by Mr. W. F. Prideaux. He wrote: I do not know if blacksmiths have yet given up the practice of dentistry in England, but they have not done so in some not very remote parts of Europe. A few years ago, when staying at Vizzavona, in the Corsican hills, my wife suffered considerable inconvenience from a loose tooth, and on inquiring from the excellent patron of the little hotel, M. Saretti, whether there was any dentist nearer than Ajaccio who could relieve her, I was told that there was a good one at Bocognano, a village two or three miles off. He added that, if we like to try him, his sister was wife of the *maire* of the commune, and that she would be glad to receive us. We therefore set off by rail under the guidance of our friend's daughter, a pretty girl of fifteen. On the way Antoinette informed us that the dentist was really an *ouvrier,* and on further inquiry we discovered he was the village farrier. Arriving at Bocognano, we were received by the Mayoress in a very kind and hospitable manner, and while we were discussing coffee and cakes in her little salon she sent for the dentist, who, however, did not turn up, as he had gone to Ajaccio for the day. Our trepidation being quite removed by this good news, we spent a pleasant afternoon with our kind friends, and the next morning my wife, taking her courage in both hands, dislodged the tooth herself. On the blacksmith's presenting himself, we were therefore enabled to tell him that his services were not required. What his dental armoury consisted of I cannot say, but from what we heard at Bocognano he seems to have been a skillful practitioner.

In the past much controversy has centred round the question as to whether the Greek physicians extracted teeth. That the Egyptians paid much attention to the care and preservation of the teeth is vouched for by Herodotus: "The art of medicine is thus divided amongst them (the Egyptians): each physician applies himself to one disease only, and no more. All places abound in physicians; some physicians for the eyes, others for the head, others for the teeth, and others for internal disorders." These old Egyptians could hardly have used surgical instruments made of steel, however, for none of their dental apparatus has come down to us, although the number of various other utensils which have been preserved is very great. Another passage worth attention is that of Hippocrates, wherein he speaks of the maladies of the teeth, to wit: "With a child suffering from phagedenic affection, the tooth fell out, as the bone (jaw) had become hollow. The wife of Aspasias had violent toothache; the jaw swelled; having used a collutorium of cas-

torium and pepper, she was relieved." Again, in another place, the same writer observes: "Melesander, the gums being affected, swollen, and very painful, he was bled on the arm; Egyptian alum helps at the outset." Elsewhere, Hippocrates has also written: "At Candia, the child of Metradorus, in consequence of toothache, had a sphacelus of the jaw; overgrowing flesh on the gums, the suppuration was middling, the molar teeth and jaw fell (off)."

So far, although some grave instances of teeth trouble are referred to, there is no mention of extraction, although there was every indication of this practice. However, an old text of Cælius Aurelianus refers to tablets and presents offered to the Greek temples by grateful patients who had been cured of their maladies. The passage runs: "Even surgical instruments were bequeathed by the inventors to these sacred shrines of Medicine. Thus, Erasistratus presented to the Delphic Temple of Apollo an instrument for extracting teeth."

The Greek writer Galen also gives some useful information concerning the teeth: "This you will discover in the food which is left in the intervals between the teeth, and which remains there at night;" while in the works of Paulus Aegineta we may light upon a whole chapter "on the extraction of the teeth." It is thus perfectly clear that the Greeks were not only acquainted with the art of extracting teeth, but there is plenty of evidence to prove that they were proficient in the making of false ones, and the stopping of decayed ones with gold.

The use of mineral teeth, or, as they were originally advertised, "Incorruptible mineral teeth," dates from about a hundred years ago—at least in this country, for at that time the first advertisements regarding them began to appear. They were formed of a species of semi-opaque enamel, and their manufacture, with the lapse of time, has now reached a very high degree of excellence. An incidental notice of their employment much earlier than their commercial development dates from 1735: "Lord Harvey has the finest set of Egyptian pebble teeth as ever you saw." This is an extract from a letter sent by the Duchess of Portland to Mrs Catherine Collingwood, and dated from Bullstrode, December 1st, 1735.

In connection with the stopping of teeth by the Egyptians, an interesting little note may be found in Sir J. Gardner Wilkinson's "Popular Account of the Ancient Egyptians," 1874: "And it is a singular fact that dentists adopted a method not very long practised in Europe of stopping teeth with gold, proofs of which have been obtained from some mummies of Thebes."

Teeth play a very important part in connection with the religious rites and ceremonies of native tribes, and, like many other things, possess a superstition and magic all their own. The teeth of the pagan races of the Malay Peninsula are usually very good, and are seldom

attacked by caries. In Semang the custom is to file them—generally half a dozen of the front teeth; while the Jukuns file theirs to a small point. Indeed, the filing of the teeth is also much resorted to by the Pacific tribes. The natives of Pánuco—one of the wild Mexican tribes—for many years, even after the Spanish conquest, filed their teeth, bored holes in them, and dyed them black. This peculiar practice of filing also prevailed to a great extent among the women of Yucatan, whose ideal of dental charms rendered a saw-like arrangement desirable. This operation was performed by certain old women professors of the art, by means of sharp gritty stones and water. Among the Lacandones—a wild tribe of Central America—it is the custom to invest the chief with lion skins, and a collar of human teeth, as a tribute to his greatness; while the Isthmians, another aboriginal tribe of the Pacific, are noted for excellent teeth, and cherish the custom of wearing teeth of all descriptions—animal as well as human—as ornaments. Many other tribes clean their teeth and paint them with cochineal, and the Otomis dye them black.

Tlaloc, a great tribal dignitary, was the god of water and rain, and the great fertilizer of the earth. Grotesque and hideous as his appearance is said to have been, his image is chiefly interesting to us from the fact that in his mouth were only three grinders, while his front teeth were painted red!

The New Mexicans are noted for white and evenly set teeth; but the Chinooks, a Columbian tribe, are chiefly remarkable for very irregular and much-worn dental ornaments. Vancouver, the traveller who made many journeys among the various Californian tribes, invariably found that all the teeth of both sexes were by some process ground down uniformly and horizontally to the gums. The women especially carried the fashion to an extreme length, reducing their teeth to even below this level.

The Hyperboreans—a term given to those Pacific Island nations whose territory lies north of the 55th parallel—possess regular teeth, but from the nature of their food, and the practice of preparing hides by chewing, they are worn down almost to the gums at a very early age. In this respect the Columbians have frequently worn their teeth down to the gums through eating sanded salmon. The salmon is opened, and the entrails, backbone, and the head removed before drying. During the latter process, sand is blown over the fish, and as a consequence, the teeth of the eater are almost worn down. It is significant that almost all travellers emphasize this point, and trace the cause to the eating of sanded salmon. The teeth of the natives are as a rule regular, but stumpy and deficient in enamel at the points.—The Dental Magazine.

Mouth Infection and Systemic Diseases

By Carl D. Lucas, D.D.S., Indianapolis, Indiana

EVERY variety of bacterium which may invade foodstuffs, water and all liquids, bacterial flora from cooking utensils, dishes, drinking vessels, fresh fruits, candies, tooth brushes, nuts, etc., are being taken daily into the mouth. Even the germ-laden air which we breathe is inhaled occasionally through the mouth.

Ninety-eight and two-tenths degrees Fahrenheit and a moist field seem to be the favorite environment for the metabolism of most germs; therefore, the mouth with its decomposing food debris, exfoliated, devitalized epithelial cells and mucous plaques, plus calcific deposits upon the teeth, is the only perfect incubator for micro-organisms. Over three hundred strains of germs have been isolated from normally healthful mouths.

Plus the above smudgeon of reeking filth, nearly every human mouth contains one or more devitalized, or more properly speaking, pulpless teeth; and within the pulp canals of such teeth, we have proven by laboratory and animal inoculation tests, are being perfectly nurtured specific micro-organisms in a perfect pabulum of devital, organic, putrefactive remnants of tooth pulps; some of these germs hematogenic anaerobes and others aerobic in teeth which have cavities in them which expose the pulpal cavities.

The above cloud upon the horizon of human intelligence may be further blackened by the negligible practice, so prevalent among ultra civilized classes, of promiscuous osculation, which is a malignant practice conducive to the transmission of infection from the possessor to the receptor.

Why the foetus is born alive, why it retains vitality and grows in spite of its unsanitary surroundings, contaminated foodstuffs, matures to manhood or womanhood, and why the adult develops mentally, physically and morally in such constantly contaminated environment, can be explained only by the practical theory of the survival of the fittest.

A constant battle is being waged in the human economy which is far more sanguinary than the human strife for democracy, personal liberty and freedom which was waged in Europe for so many years.

The proven theory of immunity manifested by the vital antigens in the human blood is the mighty army which may be stimulated to invincibility by carefully-planned preventive measures of medical and dental science. Therefore, it behooves the two professions to work hand in hand toward the possible extermination of some of the foes of human happiness and health.

Primarily, the moral obligation of each medical and dental practitioner is the prevention of disease; but this is not always possible on account of the lack of co-operation of the layman, plus his ignorance of the possibility of disease-prevention by proper living, correct diet, exercise, fresh air, pure food and water, sanitary surroundings and personal hygiene. Therefore, our first duty to the public is to educate the masses by presenting the possibilities of safeguarding their general health by their personal endeavors along the lines of correct methods and modes of living.

Many individuals today are suffering the sequela which result from minute foci of infection which constantly are draining into their circulatory systems, positively preventable by the elimination of such locked-in infections. Possibly ninety-eight per cent of these chronic conditions are due to infections of the mouth, nose, throat and accessory sinuses. Consequently, our first endeavors should be directed toward diagnosis of such foci and their elimination, rather than treatment of the conditions *per se*.

The Minute Man of the Medical Profession is not essentially a therapeutist, but rather a wide-awake diagnostician, who feels it his duty to locate the cause of disease, prescribe the immediate eradication of the cause and, possibly, assist physiological reaction by prophylactic and therapeutic treatment.

Prophylaxis instituted before focal eradication is similar in virtue to building an open sewer which readily becomes congested by precipitates which are deposited within its course. The immediate result of such treatment soon reverts to the original condition, and our time not only has been spent in vain, but also the patient is rendered susceptible to remote infections by the resultant lowered physical resistance due to retention of toxins which constantly are draining into his circulation.

The first reaction to inflammation which results from toxic inoculation is manifested by the clinical symptoms of rising temperature and a feeling of malaise. Subsequently, we note a falling in temperature below the normal, which indicates that the process of the formation of antigens, the combative forces of the body fluids, is not in direct proportion to the multiplication of the invading organisms and their eliminated toxins. If the patient's eliminative functions are stimulated therapeutically, some of the toxins are expelled and the process of immunity thereby is assisted, being relieved of a portion of the toxic load. But these measures are inadequate and not practically scientific.

A blind abscess at the root of a tooth is a constant source of general systemic absorption of its toxins; and through systematic scientific investigation we have learned that all therapeutic measures at our command are incapable of completely devitalizing the invading organisms which produce toxins.

The simple extraction of the abscessed tooth has the merit of establishing a temporary drainage for the egress of the active infective agents; but complete elimination of the focus of infection never can be accomplished by this faulty technic. An incision made into the center of the abscess would accomplish the same result. In either case, the drainage would become occluded by the formation of cicatricial tissue. Assuredly the stab-drain would close more rapidly than the tooth socket; but both operations, or either of them, would not mechanically remove the infected granulum at the apex of the socket; therefore, after the wound in either case has closed, absorption of toxins from the organisms remaining in the infected granulation tissue would ensue.

One or more oral foci of chronic infection may exist in an individual's jaw for a number of years before systemic sequela, such as myocarditis, endocarditis, arthritis, nephritis, iritis, myositis, insomnia, or a general feeling of malaise may be manifested. For the patient's physical resistance, and the stress of prosperous business, plus the psychological exhilaration and its confrere the exhilaration and the nervous energy imbued by success combined with his physiologically-raised immunity to the focal infection, are more than equalizing the toxins absorbed or partially eliminated. But if the patient should suffer a temporary lull in business, financial worries thereby becoming exaggerated, and he should become depressed mentally, thereby reducing his physical resistance and depraving his normal immunity, the sequela would automatically become manifest, and the psychopathic depression would become pathologic.

Another potent cause for the sequela of focal pathogenesis is a secondary infection which would sap the patient's resistance to the oral infection, and necessitate the formation of opsogens to combat the last infection, thereby overtaxing the antipathogenic properties of the body fluids.

Therefore, from a common-sense hypothesis, our moral and professional obligation to our patients is the immediate and complete eradication of foci of infection at the earliest possible moment. We therefore should make every effort toward becoming efficient in the diagnosis of all focal infection. It is the duty of every dentist to examine, not only the oral cavity and eliminate all oral foci of infection, but also to examine the tonsils of his patients suffering subacute infectious conditions, and advise them to consult the rhinologist when his services are necessary.

In turn, it is the physician's duty to examine the oral cavity and advise his patients to consult their dentists in every case, because ninety-eight per cent of all patients, whether they are suffering any of the subacute diseases or not have one or more focal infections, and the dentist

should be and is more competent, on account of his special training, to diagnose diseases of the oral cavity than the general practitioner or even the specialist in any branch of the medical profession.

By animal inoculation Rosenow and other investigators have proven the selectivity of the organisms which we have isolated from oral foci of infection. Animals inoculated with germs from infected periapical tissues of patients, at post-mortem examination show the germs to have been picked up in the heart, kidneys, liver, nerve trunks, joint tissues and general circulation.

A patient who reported for treatment at the Research Institute of the National Dental Association was suffering from an acute attack of myositis and toxic neuritis which produced chronic contractions of the muscles of the back of the neck, causing a retraction of the head. Radiographic diagnosis of the teeth demonstrated cryptic periapical infection of two teeth. The removal of these teeth and the curettage of the crypts permanently relieved the patient's symptoms. Anaerobic inoculations of the curettage from these sockets grew streptococcus viridans. These germs were injected into the veins of seven rabbits and four guinea pigs. Within sixty hours all of the animals so inoculated developed the identical symptoms which the patient had suffered. After the death of some of the animals their spinal cords were evulsed, emulsified and cultures made. The identical streptococcus strain was demonstrated in these cultures. The trapezius muscles of their necks also were emulsified and cultures made of these tissues. Streptococcus viridans grew in the culture media from these inoculations.

A sane, logical, preventive medical hypostasis in all subacute infectious diseases, therefore, reverts to a positive diagnosis of focal infection and subsequently its complete removal, if possible, regardless of the cosmetic circumstances or even the immediate discomfort of the patient for no disease can be treated effectively until its cause has been removed.—The Dental Summary.

Life, Death—and Bacteria

OUR desire to prolong human life requires no defense, nor is it difficult to understand. Death is rarely a welcomed visitor in the human household; and it is quite natural that thinking minds should have occupied themselves with the possibility of averting death. As Jacques Loeb has remarked, the efforts to prolong life have resulted merely in a diminution of the chances of premature death. Modern preventive medicine has succeeded in warding off many menaces to life by conquering some of the dangerous infectious diseases and even threatening contagions. At best, however, by such accomplishments each person is merely guaranteed with greater degree of probability that he may enjoy the full usual duration of life. Death is not averted.

The students of some of the lower forms of animal life have found much encouragement for the belief that protoplasm is, in a sense, immortal. The biologist Maupas had come to the conclusion, thirty years ago, that the unicellular organism which he investigated could not continue to multiply endlessly by the method of fission which represents a common mode of reproduction in these forms. They reach a certain size, then divide in two, whereupon each fragment continues to grow to full size and then divides again. Maupas asserted that the race ran out after a time unless by the sexual process of conjugation some new strain of protoplasm was introduced into the organism. The observations of Woodruff at Yale University indicate, however, that if the food and environmental conditions are suitable, reproduction may proceed an indefinitely long time without conjugation. Beginning in 1907, this American biologist has patiently followed the development of isolated infusoria through literally thousands of generations which have developed with the usual regularity without any protoplasmic contribution from other individuals of the species. Similar experiences have recently been reported by Metalnikow, who conducted his experiments in Russia. The evidence from such sources suggests that fundamentally the living cell has an inherent capacity for renewal and multiplication indefinitely. In this sense, protoplasm appears to be immortal.

For higher forms of life, comparable results also have been reported suggesting, as was indicated recently in The Journal, that elemental death might be postponed indefinitely if a suitable nutrition could be attained continuously for the cells. Carrel's prolonged growth of connective tissue fragments outside of the body indicates this. Are we to assume from these diverse facts that, in the words of Loeb, death is not inherent in the individual cell, but is only the fate of more complicated organisms in which different types of cells or tissues are dependent on each other? Metchnikoff was responsible for the widespread impres-

sion that foreign organisms in the guise of certain intestinal bacteria are responsible for premature senility and death. The hope of averting old age has been encouraged by the advice to exclude the alimentary offenders from the body through a suitable regimen. Until recently the question as to whether life without bacteria is actually possible might have been seriously debated; but Loeb and Northrup have succeeded in raising aseptically nearly a hundred successive generations of fruit flies grown on sterilized food and themselves free from bacteria. Yet these animals all arrived at old age—and died.

Can it be that the metabolism itself of a complex organism determines the ultimate onset of death? Do the chemical processes in some groups of cells produce compounds detrimental to others, or does the transformation of materials gradually consume some essential substance which is not replaced? The scientist knows that the rate of a chemical reaction ordinarily is hastened when the temperature is raised, and decreased when it is lowered. Accordingly, Loeb has reasoned that if the duration of life is the time required for the completion of certain chemical reactions in the body, the duration of life may be doubled or trebled when the environmental temperature is lowered. The test of the hypothesis has been made on the aseptic flies in which the danger of accidental death by infection is excluded. The results show that the influence of temperature on the duration of life of the fly is the same as the influence of temperature on the velocity of a chemical reaction, since a lowering of the temperature by ten degrees results in an increase in the duration of life by two or three hundred per cent., and the same figure would be obtained if we investigated the effect of temperature on the time required to complete a chemical reaction.

Such are the facts. Fortunately or unfortunately, our higher organisms cannot endure a lowered temperature; hence this device for prolonging existence cannot be requisitioned by man. In any event, death still appears as the natural result of life if the latter is to be conceived as the time required for the completion of a chemical reaction or series of such reactions. The problem of prolonging life thus appears to consist either in finding an antidote to the harmful products that gradually accumulate as the result of the body's metabolism, or in replacing that substance responsible for youthful condition and gradually destroyed in growth—or in both. At any rate, the bacteria no longer have the odious distinction of being the sole enemies of human longevity. —*Journal A. M. A.*

FUTURE EVENTS

The third annual meeting of THE SOUTHWESTERN DENTAL SOCIETY will be held at El Paso, Texas, on Thursday, Friday and Saturday, March 4-5-6. A cordial invitation is extended to practitioners of dentistry.

RAYMOND H. GUDGER, *Secretary,*
Silver City, New Mexico.

THE ALUMNI ASSOCIATION OF THE UNIVERSITY OF BUFFALO (Dental Department) will hold its annual meeting at the Iroquois Hotel on April 15, 16, 17, 1920. The meeting will be part of an Alumni Post Graduate week. The week of April 12 will afford an opportunity for every dentist who chooses to take Post Graduate work.

CLIFFORD E. ROSE, *Secretary.*

The fifty-second annual meeting of THE PENNSYLVANIA STATE DENTAL SOCIETY will be held in the Rajah Theatre, Reading, Pa., April 27, 28 and 29, 1920. An interesting and instructive program has been prepared. All ethical practitioners are invited to be present.

W. L. FICKES, *Secretary,*
6004 Penn Ave., Pittsburgh, Pa.

The next meeting of THE VERMONT BOARD OF DENTAL EXAMINERS for the examination of candidates to practice in Vermont, will be held at the Statehouse, Montpelier, June 28, 29, 30, 1920.

Candidates will present for registration and preliminaries at 10 A. M., Monday the 28th.

To be eligible for examinations a candidate must be (1) twenty-one years of age, (2) a graduate of a high school of the first class, (3) a graduate of a reputable dental college.

Applications must be in the hands of the Secretary not later than June 21st.

For further information and application blank, address,

HARRY F. HAMILTON, *Secretary,*
Newport, Vermont.

At the annual meeting of THE AMERICAN INSTITUTE OF DENTAL TEACHERS, held at Detroit in January, the following officers were elected:

President, Dr. Arthur D. Black, Chicago.

Vice-President, Dr. Guy S. Millberry, San Francisco.

Secretary-Treasurer, Dr. Abram Hoffman, Buffalo.

Executive Board, Dr. A. H. Hipple, Omaha; Dr. A. E. Webster, Toronto, Ont.; Dr. E. D. Coolidge, Chicago.

ABRAM HOFFMAN, *Secretary,*
381 Linwood Ave., Buffalo, N. Y.

THE CANADIAN DENTAL ASSOCIATION will hold its tenth biennial meeting in Ottawa, Canada, August 17, 18, 19, 20, 1920.

SIDNEY W. BRADLEY, *Secretary.*

The next meeting of THE BOARD OF DENTAL EXAMINERS OF CALIFORNIA, for the purpose of examining applicants for a license to practise dentistry in that State, will be held in San Francisco beginning June 21, 1920, at 9:30 A. M. Each applicant shall file with the Secretary of the Board 15 days before that date the following credentials: (1) diploma or certificate of graduation from a reputable dental college approved by the Board; (2) a diploma from an accredited high school or a certificate signed by the State Superintendent of Public Instruction (or similar officer), to the effect that the applicant has had scholastic preparation equivalent in all respects to that demanded for graduation from a high school giving a four years' course of instruction. In lieu of high school credentials, an applicant who has been a licensed practitioner of dentistry of some other state of the United States for a period of at least five years, shall file such license or licenses which will be accepted; (3) a testimonial of moral character; (4) a recent unmounted photograph of the applicant.

C. A. HERRICK, *Secretary,*
133 Geary St., San Francisco, Calif.

STATE BOARD INSPECTOR WANTED

INSPECTOR, State Board of Dental Examiners, New York, Education Department, $1,800 to $2,000. Open only to those who are at least 25 and not over 50 years of age on the day of the examination, April 10, 1920. Candidates must be high school graduates and subsequent to such training must have pursued a course of not less than three years in a dental school registered by the State Board of Regents, and must have received the degree of doctor of dental surgery. They must be regularly licensed and registered dentists in this state, and must have practiced dentistry for not less than one year. They should be familiar with dental jurisprudence. Subjects of examination: Written examination consisting of a thesis on a subject related to the duties of the position, relative weight 4; education, experience and personal qualifications, relative weight 6. In connection with the rating of the last mentioned subject an interview may be required. Address Minor J. Terry, D.D.S., Secretary, Education Building, Albany, New York.